Chapter 3 HIV Infection and AIDS in Massachusetts

Introduction

A. Global HIV/AIDS Data

Since the first clinical evidence of AIDS was discovered by researchers in the US 20 years ago, a global pandemic has emerged, affecting every continent of the world.

While access to better prevention services, care and treatment in the developed world has led to stabilization or reduction in new HIV infections and AIDS diagnoses in recent years, the developing nations continue to be devastated by exponential increases in new HIV infections. Within these nations, the global HIV/AIDS pandemic is "…reversing development gains, robbing millions of their lives, widening the gap between the rich and poor and undermining social and economic security…" (UNAIDS fact sheet). To date, approximately 22 million people in the world have died of AIDS and over 36 million are living with HIV infection.

The following global data are presented to situate the US and Massachusetts epidemic within this broader context of the HIV/AIDS pandemic (Table 3.1). Additionally, it is important to note where the global epidemic intersects with the local epidemic. An example of this in Massachusetts is the elevated percentage HIV positive women who give birth in 2000 that are non-US born: 36% of women living with HIV who gave birth to children in Massachusetts were born either outside the US (23%) or in a US dependency (13%). (See Figure 3.35)

Table 3.1 HIV/AIDS Prevalence and Incidence by Region: Global
Data as of June 2000

PLWH/A[1] by World Region:	**Adult Prevalence Rates**	**Total Living with HIV Infection / AIDS**	**Newly Infected in 2000**
Sub-Saharan Africa	8.8%	25.3 million	3.8 million
Caribbean	2.3%	390,000	60,000
North America	0.6%	920,000	45,000
South & Southeast Asia	0.6%	5.8 million	780,000
Latin America	0.5%	1.4 million	150,000
Eastern Europe & Central Asia	0.4%	700,000	250,000
Western Europe	0.2%	540,000	30,000
North Africa & Middle East	0.2%	400,000	80,000
Australia & New Zealand	0.1%	15,000	500
East Asia & Pacific	0.07%	640,000	130,000
Total	**1.1%**	**36.1 million**	**5.3 million**

1 PLWH/A is an abbreviation for "people living with HIV infection/AIDS."
Data Source: The Henry J. Kaiser Family Foundation *AIDS at 20 Fact Sheet*., June 2001. Website: www.kff.org

- There are an estimated 920,000 people living with HIV infection/AIDS in North America (of which, approximately 750,000 are living in the United States).
- Sub-Saharan Africa has the by far the largest number of people living with HIV infection/AIDS among global regions and the highest rate of HIV/AIDS prevalence.
- Approximately 70% of people living with HIV infection/AIDS are living in Sub Saharan Africa.

B. US and Massachusetts AIDS Data

US HIV/AIDS data are provided to further situate the Massachusetts epidemic within a national context. During calendar year 2000, according to the CDC HIV/AIDS Surveillance Report, Massachusetts accounted for 2.9% of reported annual AIDS cases in the US and ranked 8th among state AIDS case rates per 100,000. Among state cumulative AIDS caseloads, Massachusetts ranked 10th. Additionally, the Boston, Massachusetts Standard Metropolitan Statistical Area (SMSA) ranked 7th in the nation among SMSAs in annual reported AIDS cases and 33rd among AIDS case rates at 16.9 per 100,000. The Springfield, Massachusetts SMSA ranked 19th in the nation among reported AIDS cases with a year 2000 rate of 24.2 per 100,000.

In the United States, the HIV/AIDS epidemic varies greatly by states and regions. This variation within the US is evident when we compare Massachusetts AIDS cases to US AIDS cases reported in 2000. Massachusetts has a higher percentage of people living with AIDS who are Hispanics, despite a lower percentage of Hispanics in the population. Massachusetts has a lower percentage of Blacks reported with AIDS relative to the US but still larger than expected relative to the population size. Additionally, Massachusetts has a higher percentage of AIDS cases reported among injection drug users, and a lower percentage among men who have sex with men, than the nation as a whole.

Table 3.2 AIDS Cases by Gender, Race/Ethnicity, and Exposure Mode: MA and US, 2000[1]

	MA		US	
By Gender:	**N**	**%**	**N**	**%**
Male	742	73%	31,588	75%
Female	276	27%	10,568	25%
Total	**1,018**		**42,156**	
By Race/Ethnicity:	**N**	**%**	**N**	**%**
White (non-Hispanic)	487	48%	13,392	32%
Black (non-Hispanic)	278	27%	19,890	47%
Hispanic	233	23%	8,173	19%
Asian / Pacific Islander	18	2%	380	1%
American Indian and Alaskan Native	1	<1%	204	<1%
Unknown	1	<1%	117	<1%
Total	**1,018**		**42,156**	
By Exposure Mode:	**N**	**%**	**N**	**%**
Male to Male Sex (MSM)	300	29%	13,562	32%
Injection Drug Use (IDU)	316	31%	8,531	20%
MSM/IDU	22	2%	1,548	4%
Heterosexual Sex	124	12%	6,530	15%
Other	11	1%	574	1%
No Identified Risk[2]	245	24%	11,411	27%
Total	**1,018**		**42,156**	

1 Cases *reported* in year 2000 are used for US-MA comparisons. (All other data presented in the Epidemiologic Profile use year of *diagnosis*.) For more information, refer to the Glossary in the Appendix.
2 No Identified Risk includes presumed heterosexual exposure mode
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- In 2000, MA had a larger percentage of people reported with AIDS who were Hispanic than were reported in the US as a whole (23% in MA vs. 19% in US) despite having a lower percentage of Hispanics in the population (6.8% in MA vs. 12.5% in US).
- Massachusetts has a lower percentage of people reported with AIDS who were Blacks in 2000 than the US as a whole (27% vs. 47%), but not as low as would be expected given the racial compositions of the populations. (Blacks represent 5.0% of MA population vs. 12.1% in the US).
- Compared to cases reported in 2000 in the US, MA had a smaller percentage of AIDS cases reported with male to male sex as an exposure mode (23% in MA vs. 32% in US) and a larger percentage of injection drug use as an exposure mode (31% in MA vs. 20% in US).

I. Massachusetts HIV/AIDS Prevalence (HIV/AIDS Case Data)

As of July 1, 2001, a total of 22,189 Massachusetts residents with HIV/AIDS had been reported to the Massachusetts HIV/AIDS Surveillance Program. Of this cumulative total, 16,642 people had developed AIDS and an additional 5,547 were diagnosed with HIV infection and had not been diagnosed with AIDS. Of the 16,642 cases of AIDS reported, 7,337 people were presumed to be living as of July 1, 2001. Of the 5,547 reported HIV cases, 5,503 were presumed to be living as of July 1, 2001.

A shortcoming of the reported HIV and AIDS case data is that it represents only those individuals who tested positive for HIV, have sought medical care and have been reported to the HIV/AIDS Surveillance Program. People who have HIV but who have not been tested are not included in these counts. The Centers for Disease Control and Prevention (CDC) proposes a theoretical model for calculating the total prevalent HIV/AIDS caseload within a US state or territory. This is a method of accounting for people who are HIV positive, but not reported to the system. The model assumes that approximately one third of people living with HIV/AIDS are living with AIDS, know of their diagnosis and have sought medical care; one third are living with HIV infection (and have not developed AIDS), know of their diagnosis and have sought medical care; and the remaining one third are either aware or unaware of their HIV positive status and have not sought medical care. Applying this model to Massachusetts would suggest that in addition to the 7,337 people living with AIDS, and the 5,503 people living with HIV infection, there are an additional 6,000 to 7,000 people living with HIV infection who may be unaware of their serostatus. This would give an estimated total prevalence of approximately 19,000 – 20,000 people living with HIV/AIDS in Massachusetts.

The HIV/AIDS prevalence data that follow describe people living with HIV/AIDS who know their status and have been reported to the state system. Since the Massachusetts HIV and AIDS reporting systems are based on provider reporting, a person must have entered a system of care at some point to be reflected in the following data. Therefore, people living with HIV/AIDS who are unaware of their status and those who are aware of their status but who have never been in medical care are not represented in this analysis.

I.A Massachusetts HIV/AIDS Prevalence: Univariate Analysis (HIV/AIDS Case Data)

The univariate analysis of HIV infection and AIDS prevalence describe at the most general level, who is living with HIV infection and AIDS in the Commonwealth of Massachusetts. Univariate data provides a stratification of only one variable at a time. Thus it can be used to provide a broad description of a population and to compare populations to each other. In this analysis, general data are provided for people living with HIV infection who have not developed AIDS, people living with AIDS, and the total population of people living with HIV/AIDS. These three groupings of HIV/AIDS prevalence are presented as they have differing implications for HIV prevention planning, HIV/AIDS prevention planning for positive people, and HIV/AIDS service planning.

From the perspectives of service planning and prevention planning, people living with HIV/AIDS represent the full service-using population and also the target population for positive prevention. The data that describe people living with HIV infection who have not developed AIDS are crucial for HIV prevention planning, as this group likely represents a population that is more recently infected.

Describing people living with HIV infection and people living with AIDS separately allows for a comparison across these two groups. Assuming that people living with HIV infection are more recently infected than people who have developed AIDS, this comparison can be a proximate indicator of differences between recent infection and less recent infection. People living with HIV infection in Massachusetts are younger than the people living with AIDS, and the percentage of females with HIV infection is higher than the percentage of females with AIDS. Across race/ethnicity, the distribution among people living with HIV infection and AIDS is very similar.

Across exposure modes, injection drug use (IDU) accounts for the largest percentage of people living with AIDS, while male to male sex (MSM) is the largest proportion of people living with HIV infection. However, the difference in percentage points across these exposure modes for both HIV infection and AIDS is small.

Table 3.3 People Living with HIV Infection/AIDS by Gender and Race/Ethnicity: MA

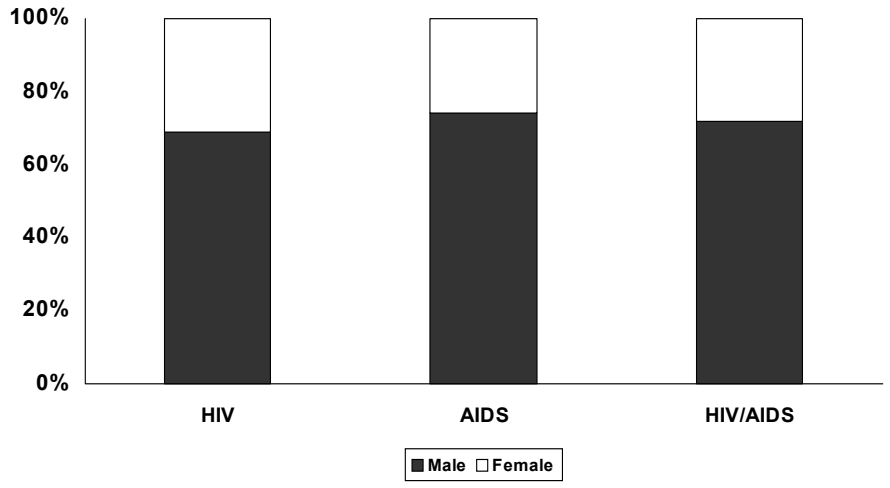
Data as of July 1, 2001

	HIV		AIDS		TOTAL HIV + AIDS	
By Gender:	**N**	**%**	**N**	**%**	**N**	**%**
Male	3,817	69%	5,455	74%	9,272	72%
Female	1,686	31%	1,882	26%	3,568	28%
By Race / Ethnicity:	**N**	**%**	**N**	**%**	**N**	**%**
White (non-Hispanic)	2,746	50%	3,520	48%	6,266	49%
Black (non-Hispanic)	1,317	24%	1,955	27%	3,272	25%
Hispanic/Latino	1,336	24%	1,772	24%	3,108	24%
Asian / Pacific Islander	41	1%	67	1%	108	1%
American Indian and Alaskan Native	9	<1%	10	<1%	19	<1%
Not Specified	54	1%	13	<1%	67	1%
TOTAL	**5,503**		**7,337**		**12,840**	

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

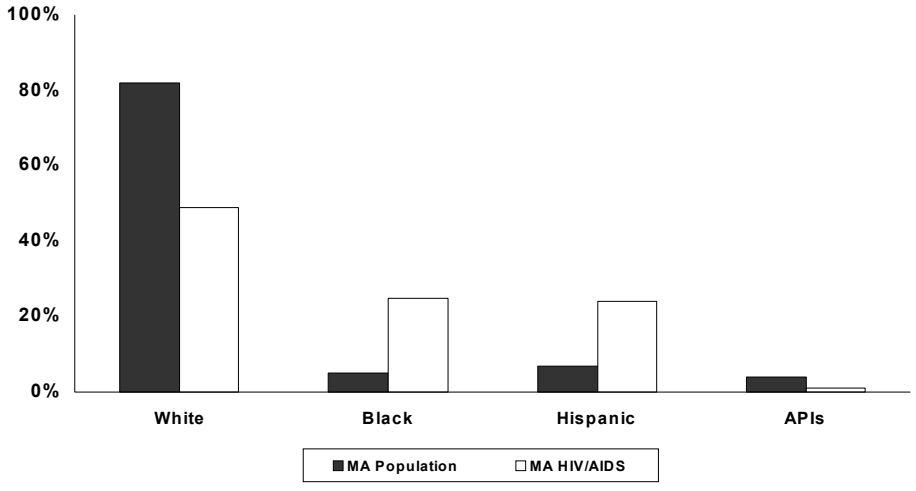
- Of the 12,840 people living with HIV infection/AIDS in MA, 5,503 (43%) are living with HIV infection and 7,337 (57%) are living with AIDS.
- The majority of people living with HIV infection/AIDS in MA are male (72%.). (See Figure 3.1)
- The percentage of females with HIV infection (31%) is higher than the percentage of females with AIDS (26%).
- Over 50% of people living with HIV infection/AIDS in MA are people of color: 25% Black (non-Hispanic), 24% Hispanic, 1% Asian/Pacific Islander, and less than 1% American Indian/Alaska Native. In sharp contrast, Black (non-Hispanic) and Hispanics represent only 12% of the total MA population. (See Figure 3.2)

Figure 3.1 People Living with HIV Infection/AIDS by Gender: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Figure 3.2 Total Population and People living with HIV Infection/AIDS by Race/Ethnicity: MA, Data as of July 1, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Table 3.4 People Living with HIV Infection/AIDS by Exposure Mode: MA

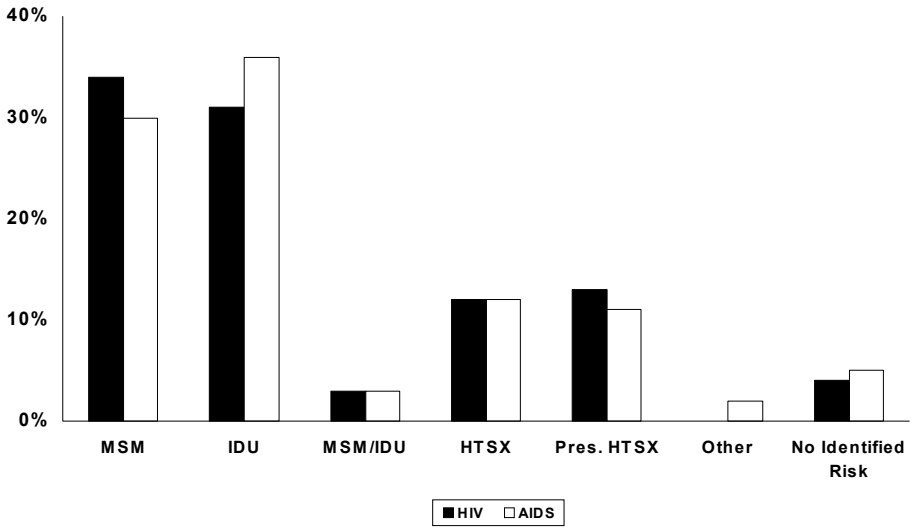
Data as of July 1, 2001

	HIV		AIDS		TOTAL HIV + AIDS	
By Exposure Mode[1]:	N	%	N	%	N	%
Male to Male Sex	1,864	34%	2,205	30%	4,069	32%
Injection Drug Use	1,733	31%	2,643	36%	4,376	34%
Male to Male Sex and Injection Drug Use	170	3%	242	3%	412	3%
Heterosexual Sex	691	12%	924	12%	1,615	13%
° Heterosexual Sex w/ an Injection Drug User	332	6%	384	5%	716	6%
° Heterosexual Sex w/ a person w/ HIV or AIDS	342	6%	511	7%	853	7%
° Heterosexual Sex w/Bisexual male	11	<1%	13	<1%	24	<1%
° Other Heterosexual Sex	6	<1%	16	<1%	22	<1%
Presumed Heterosexual[1]	738	13%	829	11%	1,567	12%
Blood / Blood products	21	<1%	120	2%	141	1%
Pediatric	--[2]	--[2]	85	1%	85	1%
Occupational	1	<1%	0	0%	1	<1%
No Identified Risk	285	4%	289	5%	574	4%
Total	**5,503**		**7,337**		**12,840**	

1 See the Glossary for an explanation of Exposure Mode categories
2 Data on pediatric cases of HIV are not indicated here. Refer to the section on Pediatric Spectrum of Disease
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Injection drug use is the leading risk for HIV infection among people living with HIV infection/AIDS, accounting for 34% of all exposures. Heterosexual sex with an injection drug user accounts for an additional 6% of exposure to HIV among people living with HIV infection/AIDS in MA. (See Figure 3.3)
- Male to male sex accounts for the largest percent (34%) of HIV exposures among people living with HIV infection who have not been diagnosed with AIDS, whereas injection drug use accounts for the largest percent of (36%) of HIV exposures among people living with AIDS. (See Figure 3.3)

Figure 3.3 People Living with HIV Infection and AIDS by Exposure Mode: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Table 3.5 People living with HIV infection by Age at HIV Diagnosis and People Living with AIDS by Age at AIDS Diagnosis: MA

Data as of July 1, 2001

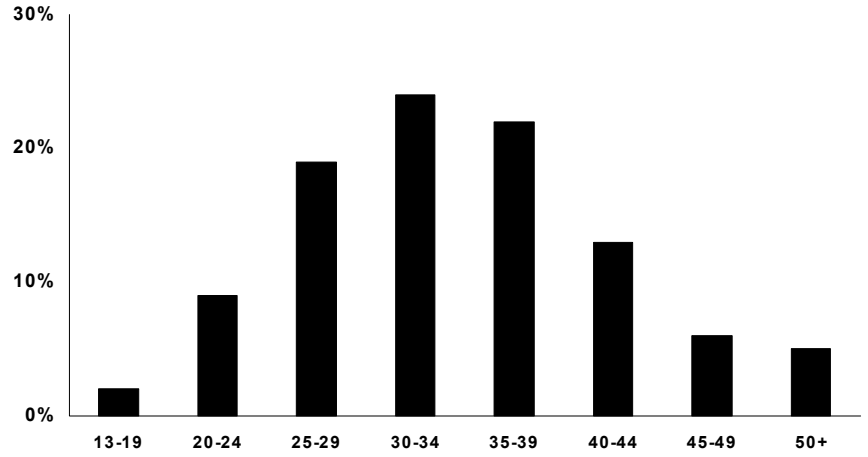
By Age at HIV Diagnosis, in Years:	N	%
Under 13	--[1]	--[1]
13 to 19	114	2%
20 to 24	486	9%
25 to 29	1,028	19%
30 to 34	1,307	24%
35 to 39	1,201	22%
40 to 44	739	13%
45 to 49	352	6%
50+	276	5%
Total	5,503	

By Age at AIDS Diagnosis, in Years:	N	%
Under 13	74	1%
13 to 19	41	1%
20 to 24	223	3%
25 to 29	857	12%
30 to 34	1,713	23%
35 to 39	1,821	25%
40 to 44	1,343	18%
45 to 49	715	10%
50+	550	7%
Total	7,337	

1 Data on Pediatric cases of HIV are not included here. Refer to the section on Pediatric Spectrum of Disease
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- 11% of people living with HIV infection were diagnosed with HIV infection while they were adolescents (13 – 24 years old).
- 65% of people in MA were diagnosed with HIV infection between the ages of 25 and 39. (See Figure 3.4).
- 66% of people in MA were diagnosed with AIDS between the ages of 30 and 44.

Figure 3.4 People Living with HIV Infection by Age at HIV Diagnosis: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

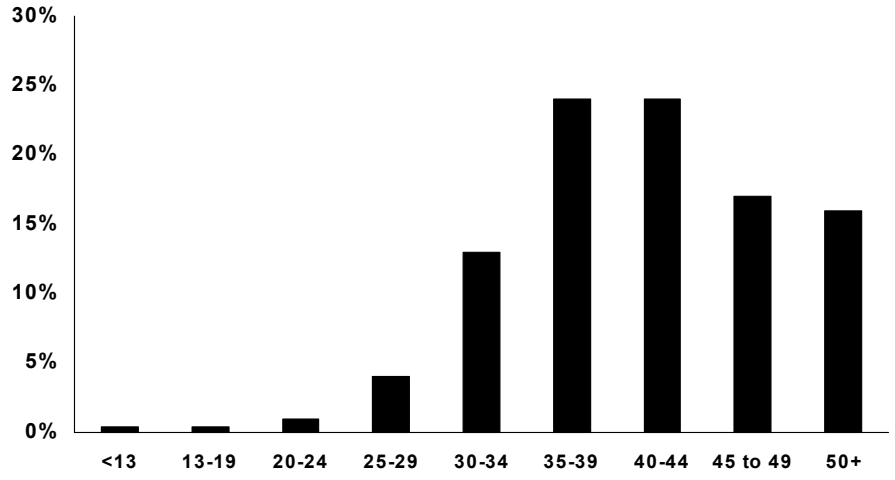
Table 3.6 People living with HIV infection and AIDS by Current Age: MA
Data as of July 1, 2001

PLWH/A by Current Age, in Years:	N	%
Under 13	52	<1%
13 to 19	53	<1%
20 to 24	174	1%
25 to 29	552	4%
30 to 34	1,699	13%
35 to 39	3,043	24%
40 to 44	3,063	24%
45 to 49	2,199	17%
50+	2,005	16%
Total	**12,840**	

1 Data on Pediatric cases of HIV are not included here. Refer to the section on Pediatric Spectrum of Diseases
PLWH/A = People living with HIV infection/AIDS
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- 81% of people living HIV/AIDS in MA are currently 35 years and older. (See Figure 3.5)
- Less than two percent of people living with HIV infection/AIDS in MA are currently adolescents (13 – 24 years old).
- Sixteen percent of people living with HIV infection/AIDS are 50 years of age and older.

Figure 3.5 People living with HIV Infection/AIDS by Current Age: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

I.B Massachusetts HIV/AIDS Prevalence: Prevalence Rates (HIV/AIDS Case Data)

HIV/AIDS prevalence rates describe the impact of HIV/AIDS relative to the size of a population. Thus, rates are a more precise way to reveal disparities across groups. For instance, although the *number* of HIV/AIDS cases among people of color is smaller than the number of cases among Whites, the *rate* of HIV/AIDS prevalence among these groups is much higher since they make up a smaller portion of the population.

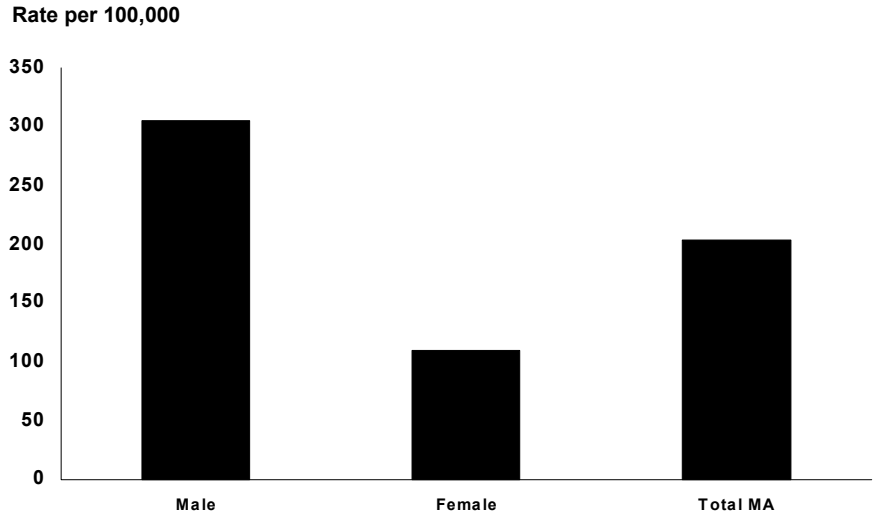
Table 3.7 Rates of HIV/AIDS Prevalence per 100,000 Population by Gender and Race/Ethnicity: MA
Data as of July 1, 2001

By Gender:	**Rate per 100,000 population[1]**
Male	305
Female	110
By Race / Ethnicity:	**Rate per 100,000 population**
White (non-Hispanic)	115
Black (non-Hispanic)	1,168
Hispanic/Latino	881
Asian / Pacific Islander	61
American Indian and Alaskan Native	143
MA Total Rate	**204**

1 The denominators for rate calculations are based on 1998 population estimates from the Massachusetts Institute for Social and Economic Research.
Data Source: MDPH HIV/AIDS Surveillance Program

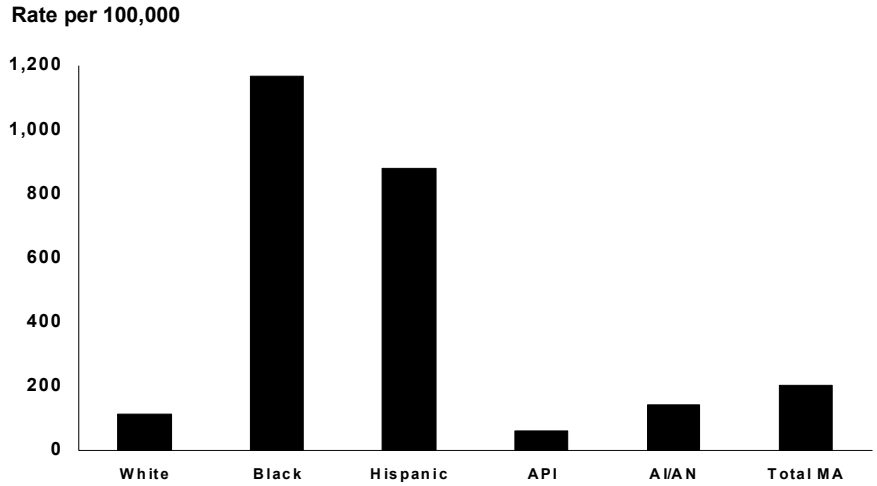
- As of July 1, 2001, for every 100,000 people in Massachusetts, 204 were living with HIV infection/AIDS.
- The rate of HIV/AIDS prevalence varies substantially across gender and race/ethnicity in Massachusetts.
- The rate of HIV/AIDS prevalence among men is nearly 3 times that among women. (See Figure 3.6).
- The rate of HIV/AIDS prevalence among Blacks is 10 times greater and the rate among Hispanics is nearly 8 times greater than the HIV/AIDS prevalence among Whites. (See Figure 3.7).

Figure 3.6 Rate of HIV/AIDS Prevalence per 100,000[1] Population by Gender: MA, Data as of July 01, 2001



1 The denominators for rate calculations are based on 1998 population estimates from the Massachusetts Institute for Social and Economic Research, Data Source: MDPH HIV/AIDS Surveillance Program

Figure 3.7 Rate of HIV/AIDS Prevalence per 100,000[1] Population by Race/Ethnicity: MA, Data as of July 01, 2001



1 The denominators for rate calculations are based on 1998 population estimates from the Massachusetts Institute for Social and Economic Research; API = Asian/Pacific Islander; AI/AN = American Indian/Alaska Native; Data Source: MDPH HIV/AIDS Surveillance Program

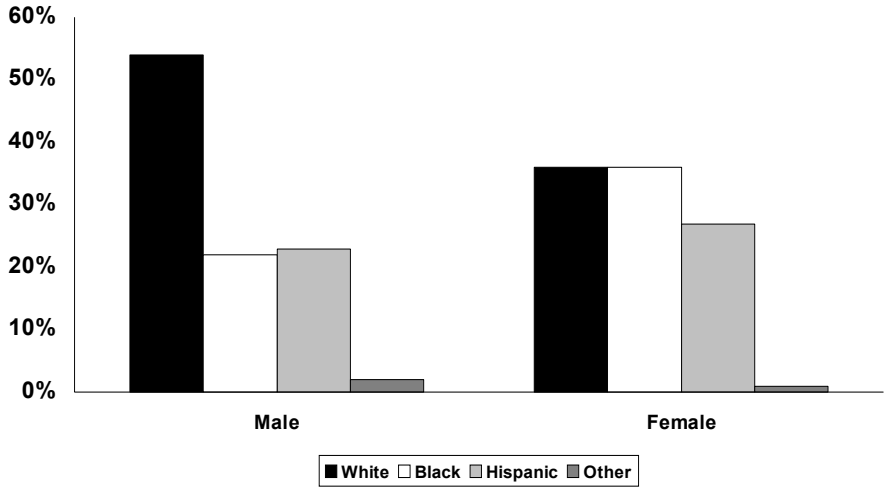
Table 3.8 People living with HIV infection and AIDS by Gender and Race/Ethnicity: MA
Data as of July 1, 2001

	Male		Female	
People living with HIV infection:	**N**	**%**	**N**	**%**
White (non-Hispanic)	2,126	56%	620	37%
Black (non-Hispanic)	767	20%	550	33%
Hispanic	851	22%	485	29%
Asian/Pacific Islander	32	1%	9	1%
American Indian/Alaskan Native	2	<1%	7	<1%
Unknown	39	1%	15	1%
Total	**3,817**		**1,686**	
People Living with AIDS:	**N**	**%**	**N**	**%**
White (non-Hispanic)	2,867	53%	653	35%
Black (non-Hispanic)	1,234	23%	721	38%
Hispanic	1,280	23%	492	26%
Asian/Pacific Islander	58	1%	9	<1%
American Indian/Alaskan Native	8	<1%	2	<1%
Unknown	8	<1%	5	<1%
Total	**5,455**		**1,882**	
People Living with HIV Infection/AIDS:	**N**	**%**	**N**	**%**
White (non-Hispanic)	4,993	54%	1,273	36%
Black (non-Hispanic)	2,001	22%	1,271	36%
Hispanic	2,131	23%	977	27%
Asian/Pacific Islander	90	1%	18	1%
American Indian/Alaskan Native	10	<1%	9	<1%
Unknown	47	1%	20	1%
Total	**9,272**		**3,568**	

1 Percentages calculated for fewer than 5 cases are unstable and therefore are not presented
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Among males living with HIV infection/AIDS, 54% are White (non-Hispanic), 22% are Black (non-Hispanic) and 23% are Hispanic. (See Figure 3.8)
- Among females living with HIV infection/AIDS 36% are White (non-Hispanic) 36% are Black (non-Hispanic) and 27% are Hispanic. (See Figure 3.8)
- Asian/Pacific Islanders and American Indian/Alaskan Natives make up less than 1% of the people living with HIV infection/AIDS for both males and females. (See Figure 3.8)

Figure 3.8 People Living with HIV Infection/AIDS, by Gender and Race/Ethnicity: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Table 3.9 People living with HIV infection and AIDS by Exposure Mode[1] and Gender: MA

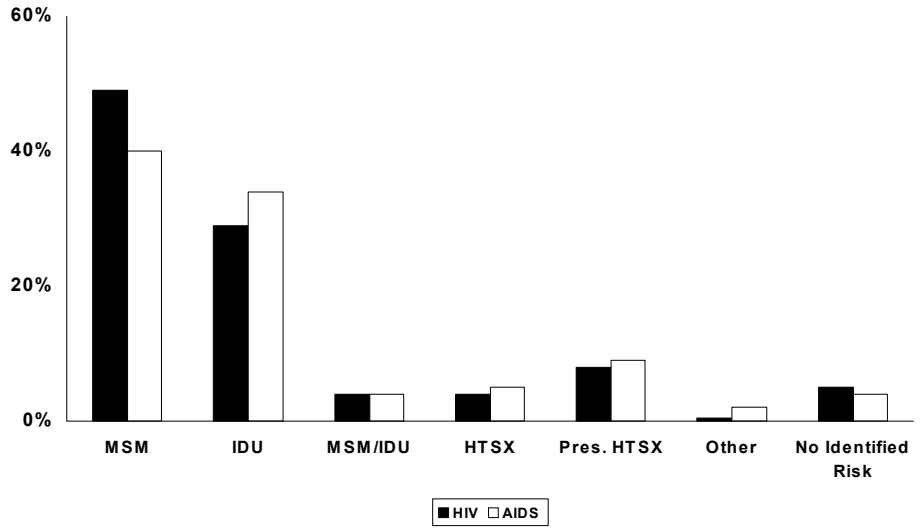
Data as of July 1, 2001

	Male		Female	
People living with HIV infection:	**N**	**%**	**N**	**%**
Male to Male Sex	1,864	49%	-	-
Injection Drug Use	1,112	29%	621	37%
Male to Male Sex & Injection Drug Use	170	4%	-	-
Heterosexual Sex	170	4%	521	31%
Presumed Heterosexual Sex	305	8%	433	26%
Other	15	<1%	7	<1%
No Identified Risk	181	5%	104	6%
Total	**3,817**		**1,686**	
People Living with AIDS:	**N**	**%**	**N**	**%**
Male to Male Sex	2,205	40%	-	-
Injection Drug Use	1,873	34%	770	39%
Male to Male Sex & Injection Drug Use	242	4%	-	-
Heterosexual Sex	282	5%	642	33%
Presumed Heterosexual Sex	489	9%	340	22%
Other	124	2%	81	2%
No Identified Risk	240	4%	49	4%
Total	**5,455**		**1,882**	
People Living with HIV infection/AIDS:	**N**	**%**	**N**	**%**
Male to Male Sex	4,069	44%	-	-
Injection Drug Use	2,985	32%	1,391	39%
Male to Male Sex & Injection Drug Use	412	4%	-	-
Heterosexual Sex	452	5%	1,163	33%
Presumed Heterosexual Sex	794	9%	773	22%
Other	139	1%	88	2%
No Identified Risk	421	5%	153	4%
Total	**9,272**		**3,568**	

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)
1 Refer to the Glossary for a full explanation of Exposure Mode categories

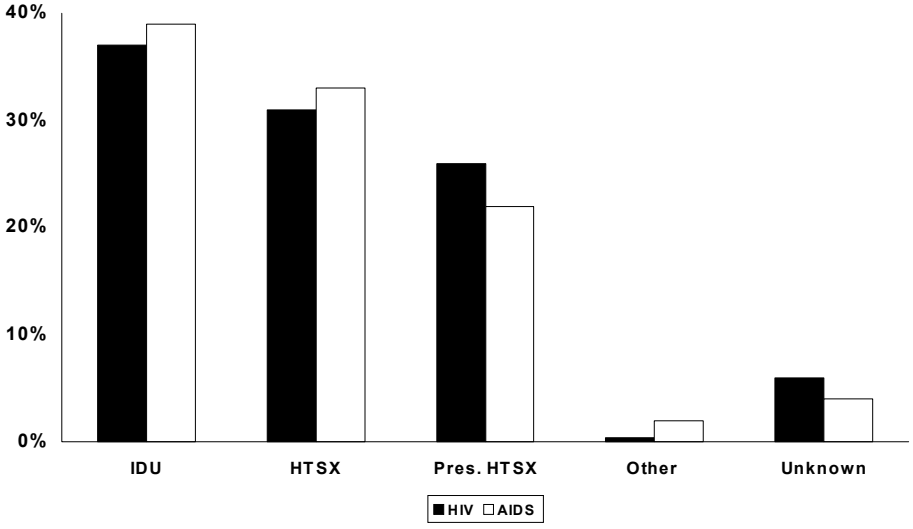
- For males, male to male sex is the primary reported risk for HIV infection among people living with HIV infection (49%) and people living with AIDS (40%), followed by injection drug use (29% for HIV and 34% for AIDS). (See Figure 3.9)
- For females, injection drug use accounts for the most frequent exposure to HIV (37% of females living with HIV infection and 39% of females living with AIDS); this is followed by heterosexual sex and presumed heterosexual sex. (See Figure 3.10)

Figure 3.9 Men Living with HIV Infection and AIDS by Exposure Mode: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Figure 3.10 Women Living with HIV Infection and AIDS by Exposure Mode: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

I.C Massachusetts HIV/AIDS Prevalence: Cross Tabulations (HIV/AIDS Case Data)

Cross-tabulated analyses of HIV/AIDS data provide a more detailed profile of the HIV/AIDS epidemic. Unlike the univariate analysis, cross-tabulated data is stratified by more than one variable at a time. For example, instead of simply presenting the racial/ethnic distribution of all people living with HIV/AIDS, as in Table 3.3, the following analysis will examine two variables simultaneously, such as race and gender or race and exposure mode.

The HIV/AIDS epidemic in Massachusetts is not uniform across different groupings. For instance, the racial/ethnic distribution of HIV/AIDS is very different among males and females. While the majority of males living with HIV/AIDS are white, women living with HIV/AIDS are predominantly Black or Hispanic. Differences are also apparent across gender by exposure mode. Among males, sexual exposure through male to male sex accounts for the largest percentage of exposures whereas for women, injection drug use accounts for the largest proportion of exposures.

There is also variation in the racial/ethnic distribution across reported exposure modes. While the vast majority (77%) of people living with HIV/AIDS who were exposed through male to male sex are White, the majority of people who were exposed through injection drug use or heterosexual sex are people of color. Additionally, the majority of people living with HIV/AIDS who were exposed, presumably, through heterosexual sex are Black.

Analyses based on Health Service Regions (HSR) describe the geographic variability in the HIV/AIDS epidemic in Massachusetts. For instance, the distribution of people living with HIV infection across gender varies greatly by HSR. In the Western and Central HSRs, the gender distribution of people with HIV infection is similar (females comprise 45% in the Western HSR and 42% in the Central HSR). In the eastern part of the state, HIV infection is predominantly reported in males: 76% of the case are among males in the Boston HSR and 72% are among males in the Metro West HSR.

The racial/ethnic distribution of people living with HIV/AIDS also varies by HSR. While over half of people living with HIV/AIDS in the Metrowest, Northeast, and Southeast HSRs are White, nearly half of people living with HIV/AIDS in the Western HSR are Hispanic and a large proportion of people living with HIV/AIDS in the Boston HSR are Black. The impact of HIV infection /AIDS among communities of color is disproportionate relative to their size of the population. For example, while Hispanics account for only 10% of the population in the Western HSR, they comprise 48% of the people living with HIV/AIDS. (See Chapter 2 for detailed demographic data by HSR)

There is also geographic variation by reported exposure mode. While male to male sex predominates in the Boston and Metro West HSRs, injection drug use predominates in the Western, Central, and Southeast and Northeast regions of the state.

Table 3.10 People living with HIV Infection and AIDS by Exposure Mode and Race/Ethnicity: MA

Data as of July 1, 2001

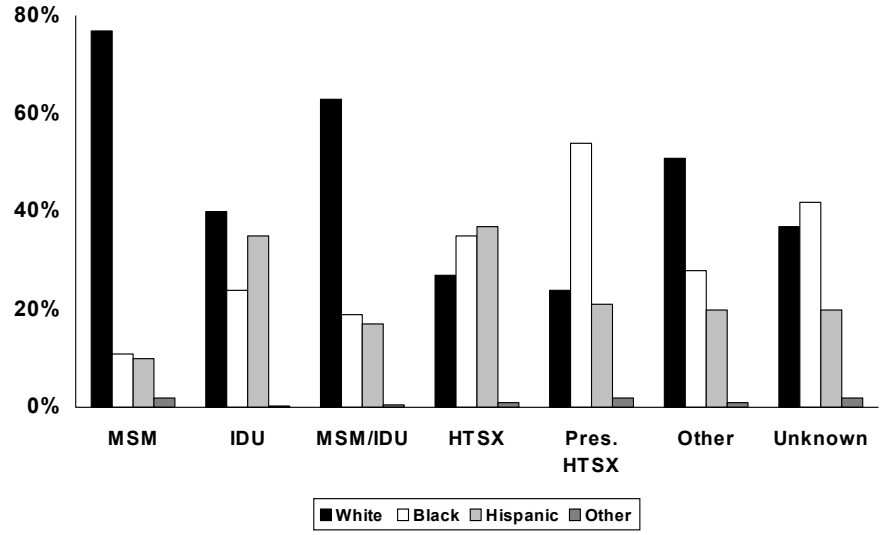
People living with HIV infection:	White NH	Black NH	Hispanic	API	AI/AN	Total[1]
Male to Male Sex (MSM)	77%	10%	11%	1%	1%	**1,864**
Injection Drug Use (IDU)	42%	23%	34%	<1%	<1%	**1,733**
MSM/IDU	64%	19%	17%	0%	0%	**170**
Heterosexual Sex	28%	29%	42%	<1%	<1%	**691**
Presumed Heterosexual Sex	24%	53%	21%	2%	<1%	**738**
Other	68%	27%	5%	0%	0%	**22**
No Identified Risk	37%	40%	22%	1%	0%	**285**
People Living with AIDS:	**White NH**	**Black NH**	**Hispanic**	**API**	**AI/AN**	**Total[1]**
Male to Male Sex (MSM)	77%	12%	9%	2%	<1%	**2,205**
Injection Drug Use (IDU)	39%	24%	36%	<1%	<1%	**2,643**
MSM/IDU	63%	18%	18%	<1%	<1%	**242**
Heterosexual Sex	26%	39%	34%	1%	0%	**924**
Presumed Heterosexual Sex	23%	54%	20%	2%	0%	**829**
Other	49%	28%	21%	1%	0%	**205**
No Identified Risk	37%	44%	17%	2%	0%	**289**
People Living with HIV Infection/AIDS:	**White NH**	**Black NH**	**Hispanic**	**API**	**AI/AN**	**Total[1]**
Male to Male Sex (MSM)	77%	11%	10%	1%	1%	**4,069**
Injection Drug Use (IDU)	40%	24%	35%	<1%	<1%	**4,376**
MSM/IDU	63%	19%	17%	<1%	<1%	**412**
Heterosexual Sex	27%	35%	37%	1%	<1%	**1,615**
Presumed Heterosexual Sex	24%	54%	21%	2%	<1%	**1,567**
Other	51%	28%	20%	1%	0%	**227**
No Identified Risk	37%	42%	20%	2%	0%	**574**

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)
1 Totals include people with unspecified race/ethnicity
NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

- The majority of people living with HIV infection/AIDS whose mode of exposure to HIV was through male to male sex are White (77%). (See Figure 3.11)
- Forty percent of the people living with HIV infection/AIDS whose mode of exposure was injection drug use are White, 24% are Black and 35% are Hispanic. (See Figure 3.11)

- There is a fairly even race/ethnic distribution among people living with HIV infection/AIDS whose reported mode of exposure was heterosexual sex: 27% are White, 35% are Black and 37% are Hispanic. (See Figure 3.11)
- Of all cases reported with "presumed heterosexual" as the mode of exposure, 54% were among Blacks.

Figure 3.11 People Living with HIV Infection/AIDS; by Exposure Mode and Race/Ethnicity: MA Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Table 3.11 People Living with HIV Infection and AIDS by Health Service Region and Gender: MA

Data as of July 1, 2001

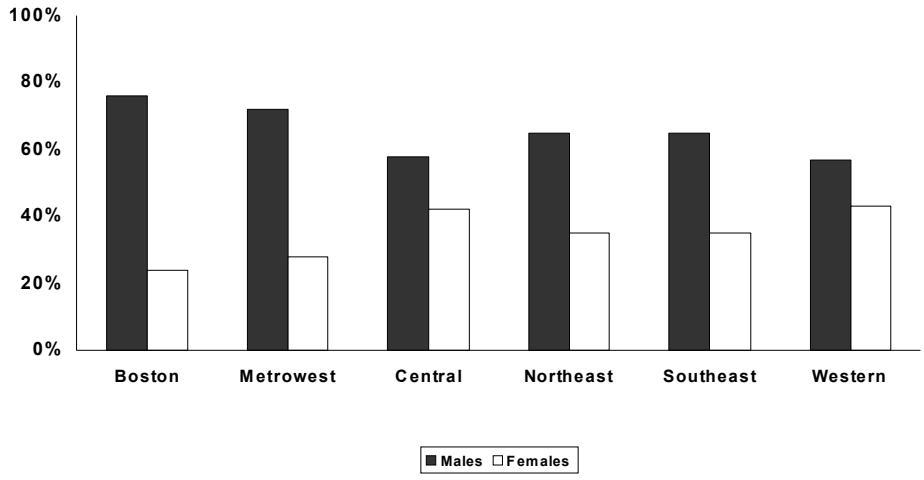
	Male		Female		Total
People living with HIV infection:	**N**	**%**	**N**	**%**	**N**
Boston HSR	1,319	76%	410	24%	**1,729**
Metro West HSR	486	72%	189	28%	**675**
Central HSR	272	58%	193	42%	**465**
Northeast HSR	478	65%	253	35%	**731**
Southeast HSR	503	65%	272	35%	**775**
Western HSR	375	57%	279	43%	**654**
Unknown[1]	6	55%	5	45%	**11**
Prison	378	82%	85	18%	**463**
People Living with AIDS:	**N**	**%**	**N**	**%**	**N**
Boston HSR	1,853	77%	558	23%	**2,411**
Metro West HSR	661	74%	233	26%	**894**
Central HSR	427	66%	217	34%	**644**
Northeast HSR	753	72%	292	28%	**1,045**
Southeast HSR	758	74%	261	26%	**1,019**
Western HSR	571	68%	265	32%	**836**
Unknown	0	0%	0	0%	**0**
Prison	432	89%	56	11%	**488**
People Living with HIV Infection/AIDS:	**N**	**%**	**N**	**%**	**N**
Boston HSR	3,172	77%	968	23%	**4,140**
Metro West HSR	1,147	73%	422	27%	**1,569**
Central HSR	699	63%	410	37%	**1,109**
Northeast HSR	1,231	69%	545	31%	**1,776**
Southeast HSR	1,261	70%	533	30%	**1,794**
Western HSR	946	63%	544	37%	**1,490**
Unknown	6	55%	5	45%	**11**
Prison	810	85%	141	15%	**951**

1 Individuals whose Health Service Region is not determined
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- The distribution of people living with HIV infection/AIDS by gender varies by Health Service Region (HSR).
- The Western and Central HSRs have the greatest percentage of females living with HIV, at 43% and 42%, respectively. (See Figure 3.12)

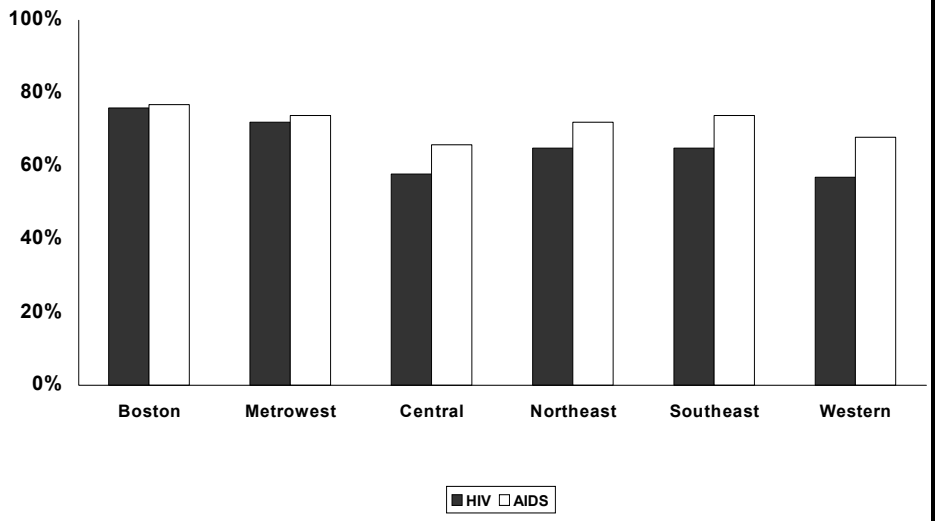
- The Boston and Metro West HSRs have the greatest percentage of males living with HIV at 76% and 72%, respectively. (See Figure 3.12)
- In each HSR, females account for a greater percentage of people living with HIV infection than they do of AIDS. (See Figures 3.13 and 3.14)

Figure 3.12 People Living with HIV Infection by Health Service Region and Gender: MA, Data as of July 01, 2001



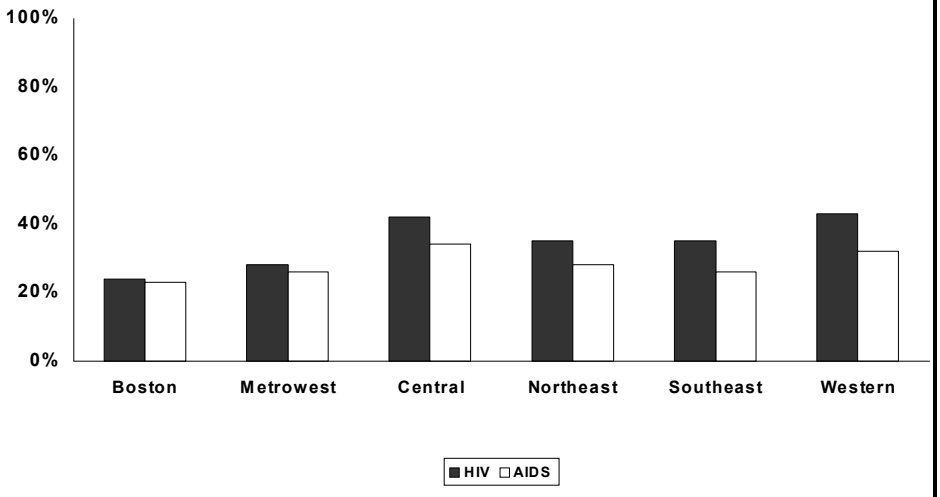
Data Source: MDPH HIV/AIDS Surveillance Program

Figure 3.13 Men Living with HIV Infection and AIDS by Health Service Region: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Figure 3.14 Women Living with HIV Infection and AIDS by Health Service Region: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Table 3.12 People Living with HIV Infection and AIDS by Health Service Region and Race/Ethnicity: MA
Data as of July 1, 2001

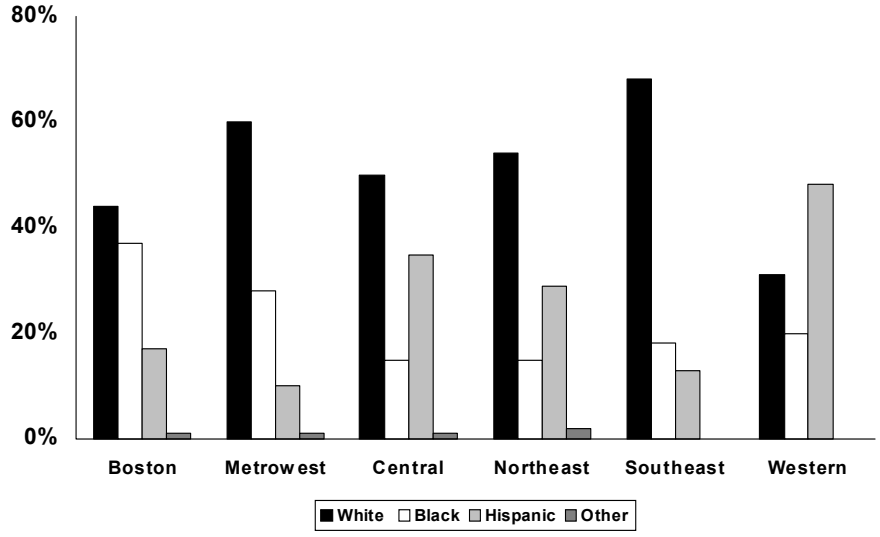
People living with HIV infection:	White NH	Black NH	Hispanic	Other[2]	NIR	Total
Boston HSR	48%	32%	17%	2%	1%	**1,729**
Metro West HSR	60%	28%	10%	1%	1%	**675**
Central HSR	48%	16%	36%	<1%	<1%	**465**
Northeast HSR	53%	17%	29%	1%	<1%	**731**
Southeast HSR	70%	16%	13%	<1%	1%	**775**
Western HSR	28%	20%	48%	<1%	3%	**654**
Prison	33%	26%	40%	1%	<1%	**463**
People Living with AIDS:	**White NH**	**Black NH**	**Hispanic**	**Other[2]**	**NIR**	**Total**
Boston HSR	41%	41%	17%	1%	<1%	**2,411**
Metro West HSR	61%	29%	9%	2%	<1%	**894**
Central HSR	51%	14%	34%	1%	<1%	**644**
Northeast HSR	54%	14%	30%	2%	<1%	**1,045**
Southeast HSR	66%	20%	13%	<1%	<1%	**1,019**
Western HSR	33%	19%	47%	<1%	0%	**836**
Prison	31%	23%	45%	<1%	0%	**488**
People Living with HIV Infection / AIDS:	**White NH**	**Black NH**	**Hispanic**	**Other[2]**	**NIR**	**Total**
Boston HSR	44%	37%	17%	1%	<1%	**4,140**
Metro West HSR	60%	28%	10%	1%	1%	**1,569**
Central HSR	50%	15%	35%	1%	<1%	**1,109**
Northeast HSR	54%	15%	29%	2%	<1%	**1,776**
Southeast HSR	68%	18%	13%	<1%	1%	**1,794**
Western HSR	31%	20%	48%	<1%	1%	**1,490**
Prison	32%	25%	42%	1%	<1%	**951**

1 PLWH of unknown residence are not included.
2 Individuals whose Health Service Region is not determined
Data Source: MDPH HIV/AIDS Surveillance Program

- The distribution of people living with HIV infection/AIDS by race/ethnicity varies by Health Service Region (HSR).

- Whites account for the largest percentage of people living with HIV infection/AIDS across race/ethnicity in all HSRs except the Western HSR, where Hispanics are the largest group. (See Figure 3.15)
- The Boston HSR has the highest percentage (37%) of Black people living with HIV infection/AIDS followed by the Metro West HSR (28%). (See Figure 3.15)
- The Western HSR has the highest percentage (48%) of Hispanic people living with HIV infection/AIDS followed by the Central HSR (35%). (See Figure 3.15)

Figure 3.15 People Living with HIV Infection/AIDS; by Health Service Region and Race/Ethnicity: MA Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program

Table 3.13 People living with HIV Infection and AIDS by Health Service Region and Exposure Mode[1]: MA
Data as of July 1, 2001

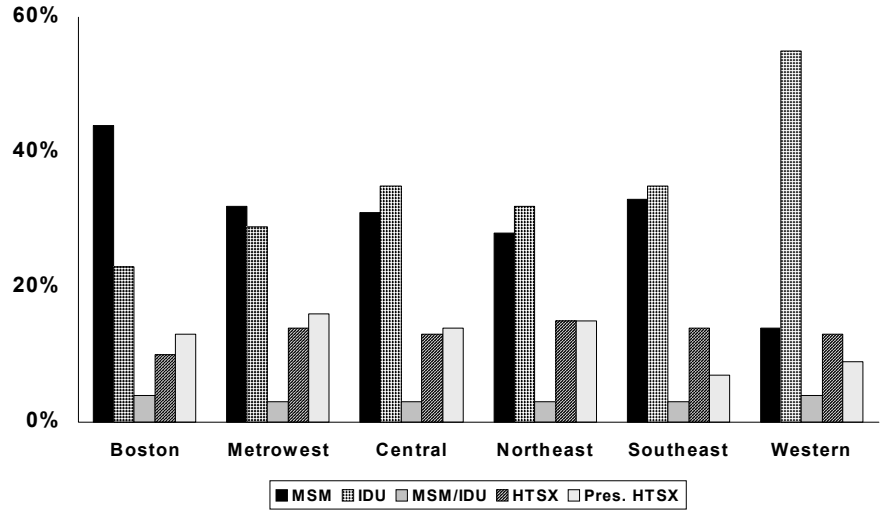
People living with HIV infection:	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
Boston HSR	49%	21%	4%	8%	13%	<1%	5%	**1,729**
Metro West HSR	43%	22%	2%	10%	16%	1%	5%	**675**
Central HSR	21%	41%	2%	21%	12%	<1%	3%	**465**
Northeast HSR	29%	29%	2%	16%	17%	<1%	6%	**731**
Southeast HSR	33%	35%	3%	14%	10%	1%	5%	**775**
Western HSR	18%	35%	2%	20%	16%	0%	9%	**654**
Prison	5%	69%	5%	7%	10%	<1%	3%	**463**
People Living with AIDS:	**MSM**	**IDU**	**MSM/ IDU**	**HTSX**	**Pres. HTSX**	**Other**	**NIR**	**Total**
Boston HSR	40%	25%	3%	12%	13%	3%	4%	**2,411**
Metro West HSR	37%	23%	3%	10%	18%	4%	5%	**894**
Central HSR	17%	48%	3%	16%	11%	4%	2%	**644**
Northeast HSR	27%	33%	4%	15%	13%	3%	5%	**1,045**
Southeast HSR	33%	35%	3%	14%	7%	3%	4%	**1,019**
Western HSR	19%	48%	3%	16%	9%	2%	3%	**836**
Prison	3%	85%	4%	4%	2%	0%	2%	**488**
People Living with HIV Infection/AIDS:	**MSM**	**IDU**	**MSM/ IDU**	**HTSX**	**Pres. HTSX**	**Other**	**NIR**	**Total**
Boston HSR	44%	23%	4%	10%	13%	2%	4%	**4,140**
Metro West HSR	32%	29%	3%	14%	16%	3%	4%	**1,569**
Central HSR	31%	35%	3%	13%	14%	2%	4%	**1,109**
Northeast HSR	28%	32%	3%	15%	15%	2%	5%	**1,776**
Southeast HSR	33%	35%	3%	14%	7%	3%	4%	**1,794**
Western HSR	14%	55%	4%	13%	9%	2%	3%	**1,490**
Prison	11%	56%	3%	13%	10%	0%	6%	**951**

1 See the Glossary for and explanation of Exposure Mode categories. MSM = male to male sex; IDU = injection drug use; MSM/IDU = male to male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
2 PLWH of unknown residence are not included.
3 Individuals whose Health Service Region is not determined
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- In the Boston and Metro West HSRs, male to male sex accounts for a higher percentage of people living with HIV infection than with AIDS. (See Figure 3.16)

- Male to male sex accounts for the largest percentage of people living with HIV infection/AIDS in the Boston (44%) and Metro West (32%) HSRs.
- Injection drug use accounts for the largest percentage of people living with HIV infection/AIDS in the Central (35%), Northeast (32%), Southeast (35%), and Western (55%) HSRs.

Figure 3.16 People Living with HIV Infection/AIDS; by Health Service Region and Mode of Exposure: MA, Data as of July 01, 2001



Data Source: MDPH HIV/AIDS Surveillance Program
Exposure categories other and No Identified Risk are not represented

II. AIDS Incidence Data (HIV/AIDS Case Data)

Since 1981, over 16,000 people have been diagnosed with AIDS in Massachusetts. From 1981 to 1990, there was a sharp increase in the number of AIDS cases diagnosed each year. During 1985-1990, an average of 700 AIDS cases were diagnosed each year. In the following three years (1991-1993), newly diagnosed AIDS cases averaged 1,610 annually. The increase in this time period was due, in part, to the expansion of the AIDS case definition in 1993. In the three years after the change in the case definition (1994-1996), the average number of newly diagnosed AIDS cases dropped to 1,330. Recently, (1997-1999) the number of newly diagnosed AIDS cases reached a plateau at around 900 AIDS cases diagnosed each year. While the number of AIDS cases diagnosed in year 2000 appears to have dropped by about one third relative to the number of cases in each of the three preceding years, this drop should be interpreted with caution. Although it has been six months since the close of year 2000, additional case finding through the coming year may increase the number of year 2000 diagnoses.

While some of these changes over time may be due to reporting patterns, it is also likely that much of the change can be attributed to factors inherent in the epidemic and the response of the Massachusetts community to it. For instance, the initial steep rise in AIDS cases reflects the earlier years of the epidemic when less was known about the transmission of HIV, effective medical treatment did not exist, and less time elapsed between HIV infection and an AIDS diagnosis.

The decreases in new AIDS diagnoses sustained across more recent years reflect increased awareness about HIV and the prevention of its transmission. Additionally, the introduction of new highly active antiretroviral drugs after 1994 and increased access to them in Massachusetts, postponed the onset of AIDS among many individuals, causing a decrease in new diagnoses.

Thus, for more recent years of the epidemic, the AIDS trend data are not as closely tied to trends in HIV infection as they were in the earlier years of the epidemic when the time period from HIV infection to an AIDS diagnosis was shorter. Rather, the trend data now tend to reflect changes in the degree of illness (i.e. morbidity) among people who are living with HIV.

From 1993 to 1997, there was a decline in the number of AIDS cases diagnosed in Massachusetts each year from a peak in 1993 of 1,753 to 850-900 where it has remained through 1999. Since 1993, the demographic distribution of the people being diagnosed has also been shifting. For example, across gender, the percent of cases that are diagnosed among females has steadily increased. This increasing percentage among females is mirrored by the comparison of HIV cases to AIDS cases (assuming that HIV cases as a group are more recently infected than AIDS cases).

Across race/ethnicity over time, there has been a decreasing percentage of AIDS cases diagnosed among Whites, and an increase in the percentage of cases diagnosed among Blacks and Hispanics, as well as a slight increase in the percent of cases diagnosed among Asian/Pacific Islanders. Unlike the trend among women, this trend of increasing proportions among communities of color does not hold up in a comparison of HIV cases to AIDS cases. Thus, it is possible that this trend in AIDS diagnoses may relate to shifts in morbidity among racial/ethnic groups as opposed to shifts in new infections.

Regarding exposure mode, there was a shift fairly early on in the epidemic. Prior to 1992, male to male sex accounted for the majority of exposures, but in 1992, injection drug use surpassed male to male sex and has continued to be the predominant reported risk. Again this comparison is not reflected in a comparison of HIV prevalence to AIDS prevalence. This could indicate that the increased percentage of AIDS diagnoses among injection drug users reflects an increased morbidity among injection drug users over time as opposed to this being indicative of a rise in new infections. In other words, injection drug users who are HIV positive are now developing AIDS more quickly, and therefore, they comprise a higher percentage of AIDS cases than other modes of exposure.

Table 3.14 People Living with AIDS (Prevalence)[1], Deaths among People Reported with AIDS (Deaths), and Newly Diagnosed AIDS Cases (Incidence) by Year: 1990-2000, MA

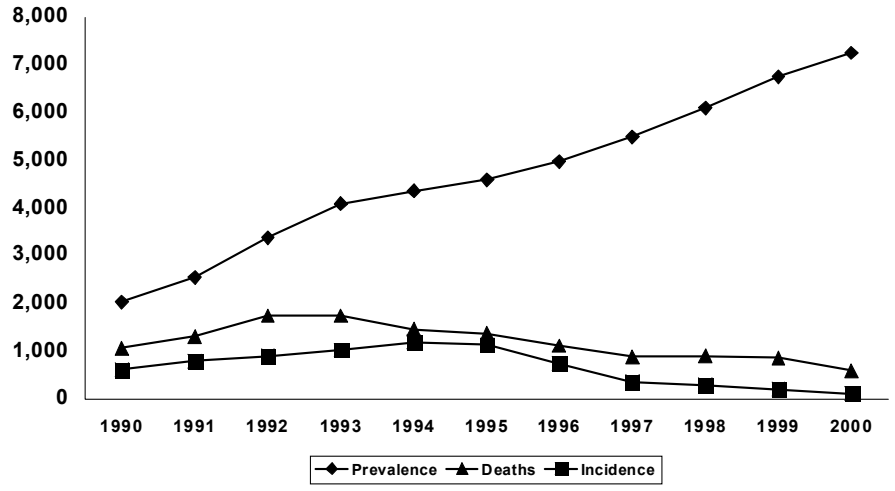
Year	Prevalence	Deaths	Incidence
1990	2,036	631	1,078
1991	2,553	814	1,331
1992	3,387	912	1,746
1993	4,098	1,042	1,753
1994	4,366	1,207	1,475
1995	4,603	1,143	1,380
1996	4,979	760	1,136
1997	5,491	375	887
1998	6,098	300	907
1999	6,756	220	878
2000[2]	7,246	119	609

1 Number of People living with AIDS on 12/31 of each year
2 2000 Death Data are preliminary
Data source: MDPH HIV/AIDS Surveillance Program

- The number of new AIDS diagnoses peaked in 1993 (N=1,753), and has been declining since then to 609 cases newly diagnosed in 2000. (See Figure 3.17)
- Deaths among people with AIDS in MA have continued to decline over time with 119 deaths reported for year 2000. (See Figure 3.17)

- The number of people living with HIV infection/AIDS has been steadily increasing to 7,246 by the end of year 2000. (See Figure 3.17)

Figure 3.17 AIDS Prevalence[1], Deaths[2], and Incidence[3] by Year: MA, 1990-2000



1 Prevalence = number of people living with AIDS on 12/31 of each year, 2 Deaths = number of deaths among persons reported with AIDS each year, 3 Incidence = number of new AIDS diagnoses each year, Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

Table 3.15 Total Reported AIDS cases, by Gender and Year of Diagnosis: MA

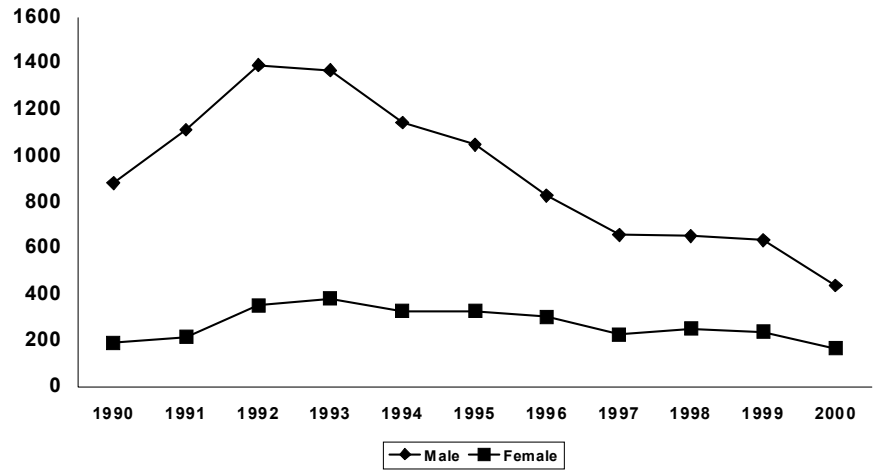
Data as of July 1, 2001

	Male		Female		
By Year:	N	%	N	%	Total
1990	883	82%	195	18%	**1,078**
1991	1,112	84%	219	16%	**1,331**
1992	1,392	80%	354	20%	**1,746**
1993	1,370	78%	383	22%	**1,753**
1994	1,144	78%	331	22%	**1,475**
1995	1,049	76%	331	24%	**1,380**
1996	832	73%	304	27%	**1,136**
1997	659	74%	228	26%	**887**
1998	654	72%	253	28%	**907**
1999	638	73%	240	27%	**878**
2000	439	72%	170	28%	**609**

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- The proportion of new AIDS diagnoses among women has remained fairly stable (26-28%) since 1996.
- Over time the number of new AIDS diagnoses among men has been consistently greater than among women. (See Figure 3.18)
- The number of AIDS cases among men peaked in 1992 and among women peaked in 1993, and after a decline, has stabilized for both males and females in recent years. (See Figure 3.18)
- Women comprised 28% of people diagnosed with AIDS in year 2000.

Figure 3.18 Total Number of Reported AIDS Cases by Gender and Year of Diagnosis: MA, 1990-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

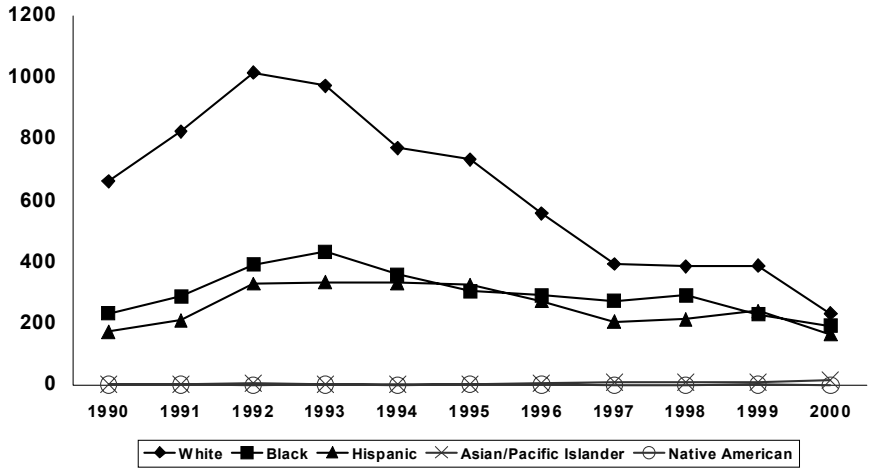
Table 3.16 Total Number of Reported AIDS cases, by Race/Ethnicity and Year of Diagnosis: MA
Data as of July 1, 2001

Number by Year of Diagnosis:	White (non-Hispanic)	Black (non-Hispanic)	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native	Total[1]
1990	662	234	174	4	2	**1,078**
1991	824	289	211	4	2	**1,331**
1992	1,014	392	330	8	1	**1,746**
1993	971	435	336	6	2	**1,753**
1994	771	361	333	5	0	**1,475**
1995	732	306	328	5	6	**1,380**
1996	559	292	274	7	3	**1,136**
1997	394	274	207	11	0	**887**
1998	387	292	215	12	0	**907**
1999	390	232	242	11	2	**878**
2000	233	192	167	16	1	**609**

1 Total includes people of unspecified race/ethnicity
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

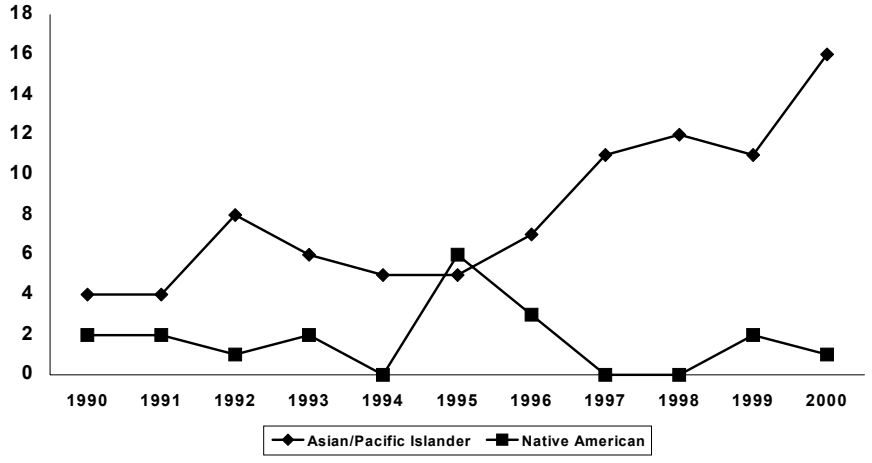
- In 2000, there were 233 Whites, 192 Blacks, 167 Hispanics, 16 Asian/Pacific Islanders, and 1 American Indian/Alaskan Native newly diagnosed with AIDS.
- Whites make up the largest number of people diagnosed with AIDS each year across race/ethnicity in MA. (See Figure 3.19)
- From 1995 to 2000, there has been an increase in the number of Asian/Pacific Islanders diagnosed with AIDS. (See Figure 3.20)
- After peaking in 1992, the number of Whites diagnosed with AIDS decreased by 77%; After peaking in 1993, the number of Blacks decreased by 56% and the number of Hispanics diagnosed with AIDS decreased by 50%.

Figure 3.19 Total Number of Reported AIDS Cases by Race/Ethnicity and Year of Diagnosis: MA, 1990-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

Figure 3.20 Total Number of Reported AIDS Cases for Asian/Pacific Islanders and Native Americans and Year of Diagnosis: MA, 1990-2000



1 The data presented in this figure represent small numbers of cases, and therefore, caution should be used in the interpretation. (Note that the maximum value on the y-axis is 18 compared to 1200 in figure 3.19); Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

Table 3.17 Percent of Total Reported AIDS cases, by Race/Ethnicity and Year of Diagnosis: MA
Data as of July 1, 2001

Percent by Year of Diagnosis:	White (non-Hispanic)	Black (non-Hispanic)	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native
1990	61%	22%	16%	<1%	<1%
1991	62%	22%	16%	<1%	<1%
1992	58%	22%	19%	<1%	<1%
1993	55%	25%	19%	<1%	<1%
1994	52%	24%	23%	<1%	<1%
1995	53%	22%	24%	<1%	<1%
1996	49%	26%	24%	1%	<1%
1997	44%	31%	23%	1%	<1%
1998	43%	32%	24%	1%	<1%
1999	44%	26%	28%	1%	<1%
2000	38%	32%	27%	3%	<1%

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- In 2000, 38% of the newly reported AIDS cases were among Whites, 32% among Blacks, 27% among Hispanics and 3% among Asian/Pacific Islanders.
- People of color have formed an increasing proportion of newly diagnosed AIDS cases since 1992, accounting for 62% of the cases diagnosed in year 2000 compared to 42% in 1992.

Table 3.18 Number and Percent of Reported AIDS Cases by Exposure Mode[1] and Year of Diagnosis: MA, 1990-2000

Data as of July 1, 2001

Number	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
1990	479	339	43	75	55	58	29	**1,078**
1991	545	474	63	92	61	58	38	**1,331**
1992	651	688	65	152	70	84	36	**1,746**
1993	620	702	75	168	66	55	67	**1,753**
1994	470	575	61	196	69	28	76	**1,475**
1995	426	567	56	165	72	36	58	**1,380**
1996	339	433	33	171	75	35	50	**1,136**
1997	235	351	26	117	88	19	51	**887**
1998	233	309	22	115	151	18	59	**907**
1999	203	335	19	104	185	4	28	**878**
2000	139	189	8	95	131	7	40	**609**

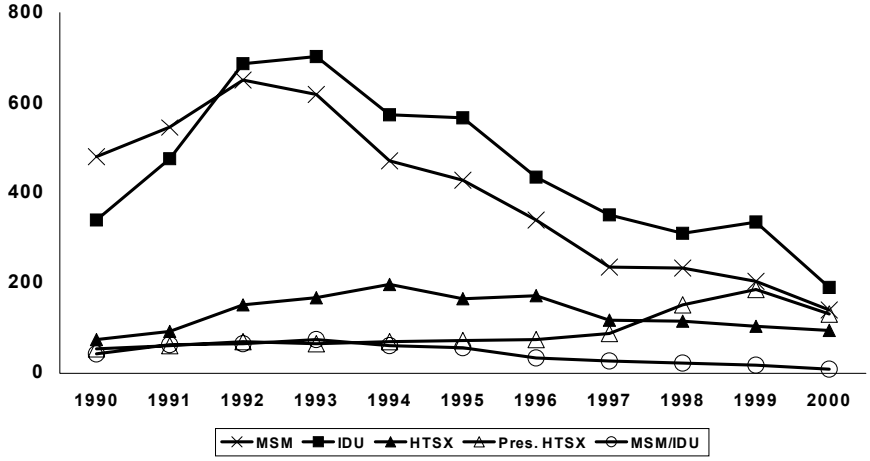
Percent	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR
1990	44%	31%	4%	7%	5%	5%	3%
1991	41%	36%	5%	7%	5%	4%	3%
1992	37%	39%	4%	9%	4%	5%	2%
1993	35%	40%	4%	10%	4%	3%	4%
1994	32%	39%	4%	13%	5%	2%	5%
1995	31%	41%	4%	12%	5%	3%	4%
1996	30%	38%	3%	15%	7%	3%	4%
1997	26%	40%	3%	13%	10%	2%	6%
1998	26%	34%	2%	13%	17%	2%	7%
1999	23%	38%	2%	12%	21%	<1%	3%
2000	23%	31%	1%	16%	22%	1%	7%

1 See the Glossary for and explanation of Exposure Mode categories. MSM = male to male sex; IDU = injection drug use; MSM/IDU = male to male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- From 1993 to 2000 the number of new AIDS diagnoses declined for each exposure mode, except presumed heterosexual, which increased during this time period.
- In 1992, the number of new AIDS diagnoses with injection drug use as an exposure mode (N=688) surpassed the number of AIDS diagnoses with male to male sex as an exposure mode (N=651), and has continued to through 2000. (See Figure 3.21)
- The number of new AIDS diagnoses with a presumed heterosexual exposure mode increased from 1993 (N=66) to 1999 (N=185), and then decreased from 1999 to 2000 (N=131). (See Figure 3.21)

- The percentage of new AIDS diagnoses that have male to male sex as an exposure mode has consistently declined from 1990 (44%) to 2000 (23%).
- From 1990 to 2000, the percentage of new AIDS diagnoses with injection drug use as an exposure mode has fluctuated between 31% and 41%.

Figure 3.21 Total Number of Reported AIDS Cases by Mode of Exposure and Year of Diagnosis : MA, 1990-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

Table 3.19 Percent of Reported AIDS Cases by Exposure Mode[1] and Year of Diagnosis *Among Males*: MA, 1990-2000

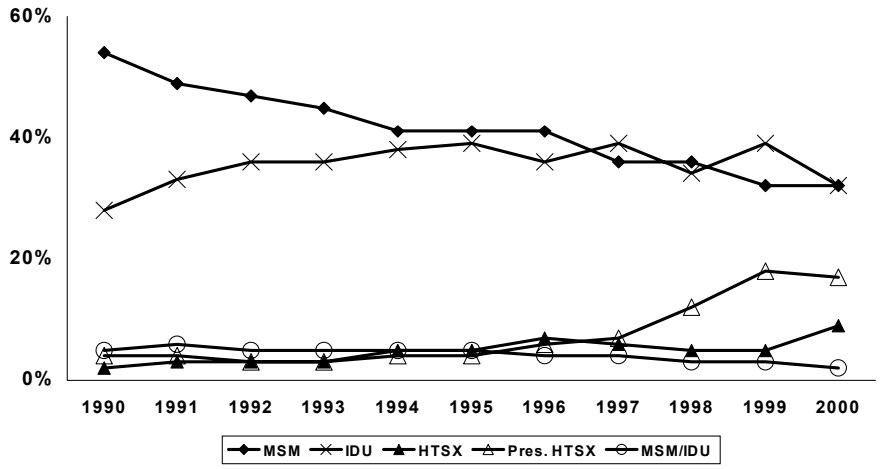
Data as of July 1, 2001

Year	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
1990	54%	28%	5%	2%	4%	4%	3%	**883**
1991	49%	33%	6%	3%	4%	4%	3%	**1,112**
1992	47%	36%	5%	3%	3%	5%	2%	**1,392**
1993	45%	36%	5%	3%	3%	3%	4%	**1,370**
1994	41%	38%	5%	5%	4%	2%	5%	**1,144**
1995	41%	39%	5%	5%	4%	2%	5%	**1,049**
1996	41%	36%	4%	7%	6%	2%	5%	**832**
1997	36%	39%	4%	6%	7%	2%	6%	**659**
1998	36%	34%	3%	5%	12%	1%	8%	**654**
1999	32%	39%	3%	5%	18%	<1%	4%	**638**
2000	32%	32%	2%	9%	17%	1%	8%	**439**

1 See the Glossary for and explanation of Exposure Mode categories. MSM = male to male sex; IDU = injection drug use; MSM/IDU = male to male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk..
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- The percent of new AIDS diagnoses with male to male sex as an exposure mode has consistently declined from 1990 (54%) to 2000 (32%). (See Figure 3.22)
- From 1991 to 2000, the percent of new AIDS diagnoses among men with injection drug use as an exposure mode has fluctuated between 32% and 39%. (See Figure 3.22)
- In 2000, male to male sex and injection drug use account for the same percent (32%) of new AIDS diagnoses among men. (See Figure 3.22)
- In 2000, the highest percentage of AIDS diagnoses among men with heterosexual sex as an exposure mode was reached (9%). (See Figure 3.22)

Figure 3.22 Percent of Reported AIDS Cases for Males by Mode of Exposure and Year of Diagnosis: MA, 1990-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

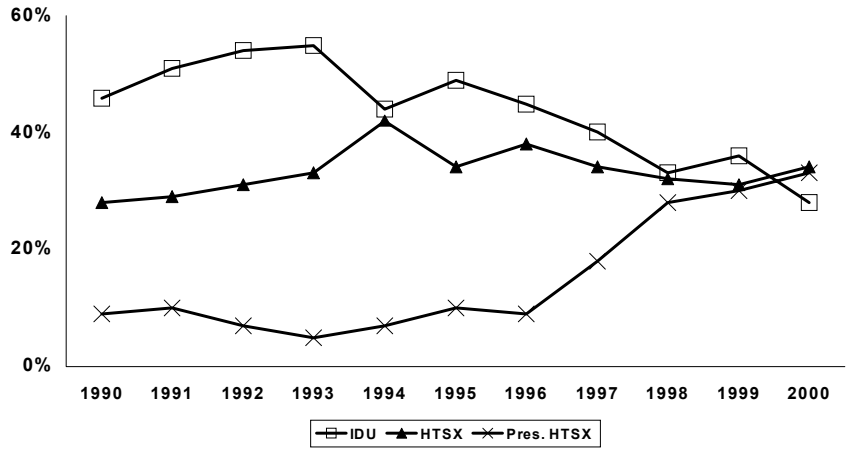
Table 3.20 Percent of Reported AIDS Cases by Exposure Mode[1] and Year of Diagnosis *Among Females*: MA, 1990-2000
Data as of July 1, 2001

Year	IDU	HTSX	Pres. HTSX	Other	NIR	Total
1990	46%	28%	9%	13%	3%	**195**
1991	51%	29%	10%	6%	4%	**219**
1992	54%	31%	7%	5%	3%	**354**
1993	55%	33%	5%	5%	3%	**383**
1994	44%	42%	7%	3%	5%	**331**
1995	49%	34%	10%	5%	3%	**331**
1996	45%	38%	9%	5%	3%	**304**
1997	40%	34%	18%	4%	4%	**228**
1998	33%	32%	28%	4%	3%	**253**
1999	36%	31%	30%	1%	2%	**240**
2000	28%	34%	33%	2%	4%	**170**

1 See the Glossary for and explanation of Exposure Mode categories. IDU = injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- The number of new AIDS diagnoses among women with injection drug use, heterosexual sex, no identified risk, and other exposure modes has declined over time in recent years.
- The percentage of new AIDS diagnoses among women with injection drug use as an exposure mode has steadily decreased from 1993 (55%) to 2000 (28%). (See Figure 3.23)
- From 1990 to 1999, injection drug use was the exposure mode for the largest percentage of new AIDS diagnoses among women. In 2000, heterosexual sex accounted for the largest percentage of new AIDS diagnoses at 34%. (See Figure 3.23)
- The percentage of new AIDS diagnoses among women with a presumed exposure of heterosexual sex increased from 1996 (9%) to 2000 (33%). (See Figure 3.23)

Figure 3.23 Percent of Reported AIDS Cases for Females by Mode of Exposure and Year of Diagnosis: MA, 1990-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

III. Diagnoses of HIV Infection (HIV/AIDS Case Data)

On January 1, 1999, HIV infection became a reportable condition in Massachusetts. At that time, the Massachusetts Department of Public Health started requiring clinical providers to submit case report forms with demographic and risk information about individuals living with HIV, as they had been doing for AIDS since 1981. For the purpose of confidentiality, no names or identifying information are included on the HIV case report forms. Prevalent HIV diagnoses through 1998 were required to be reported by the end of 2000; new as well as previously diagnosed HIV infections continue to be reported. In this document, the category of "diagnosed before 1999" serves as a baseline for comparison with the HIV data from 1999 and 2000.

HIV surveillance reflects the incidence of positive tests among people who are in care and not new infections; like AIDS case reporting, it is not a direct measure of incidence. Furthermore, as with early data for AIDS cases, the data from the first few years of a new reporting system can be unstable and caution should be used in interpretation. While a data reporting system is in its infancy, there can be inconsistencies and there is a larger possibility of fluctuations being due to reporting patterns and awareness efforts. Also, with only two complete years of HIV data available, trends over time cannot be established. However, in future years, the HIV data will provide the most recent description of new infections possible in Massachusetts. These data will be crucial for elucidating trends in infections and groups at most elevated risk for HIV infection.

With the aforementioned caveats in mind, there are some preliminary emerging patterns in the HIV data. Across race/ethnicity, there was a decrease in the proportion of cases among Whites and an increase among Blacks in the last two years of data. This increase among Blacks is mirrored by the AIDS diagnoses over time. Across exposure mode, there was decrease in the percentage of cases among injection drug users. This pattern is in contrast to the increased percentage of AIDS diagnoses among injection drug users over time. Again, caution should be used when interpreting these data.

Table 3.21 Total Reported HIV cases, by Gender and Year of Diagnosis: MA

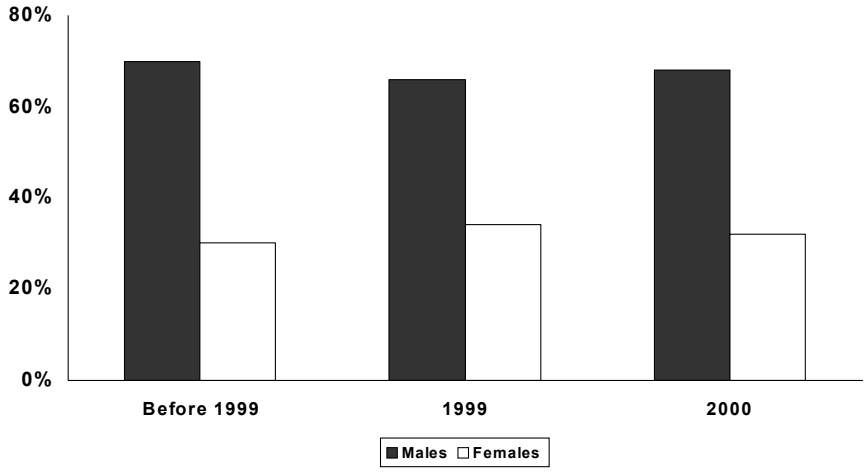
Data as of July 1, 2001

	Male		Female		
	N	%	N	%	Total
Before 1999	2,889	70%	1,243	30%	**4,132**
1999	458	66%	239	34%	**697**
2000	380	68%	180	32%	**560**

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- In 1999, there were 697 cases of newly diagnosed HIV infection reported in MA. At that time, 4,132 cases of infection that were diagnosed prior to 1999 were also reported.
- In 2000, there were 560 cases of newly diagnosed HIV infection reported. Females accounted for 32% and males accounted for 68% of these cases. (See Figure 3.24)

Figure 3.24 Percent of Reported HIV cases, by Gender and Year of Diagnosis: MA, Before 1999, 1999 & 2000 Data



Data Source: MDPH HIV/AIDS Surveillance Program ; Data as of 7/1/2001

Table 3.22 Number & Percent of Reported HIV cases, by Race/Ethnicity and Year of Diagnosis: MA

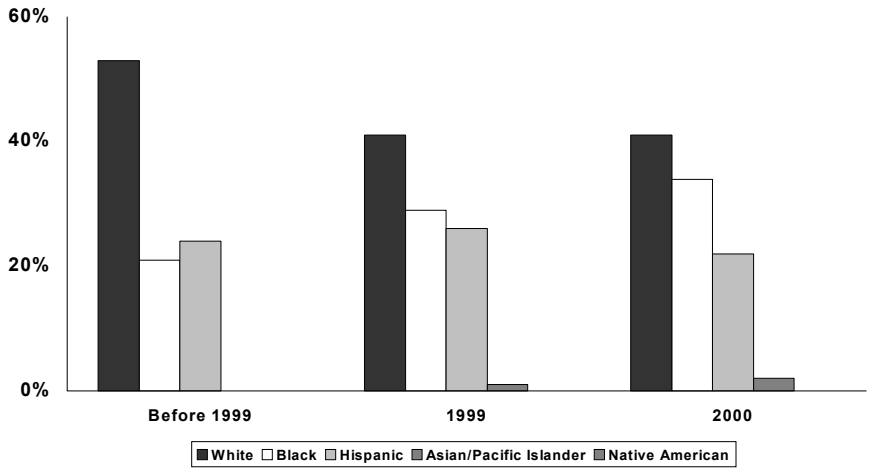
Data as of July 1, 2001

	White NH		Black NH		Hispanic		API		AI/AN		Total[1]
	N	%	N	%	N	%	N	%	N	%	
Before 1999	2,182	53%	883	21%	1,011	24%	20	<1%	4	<1%	**4,132**
1999	288	41%	202	29%	182	26%	8	1%	3	<1%	**697**
2000	227	41%	190	34%	124	22%	9	2%	2	<1%	**560**

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)
1 Totals include people with unspecified race/ethnicity
NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

- The proportion of HIV cases reported among Blacks has increased; before 1999, Blacks accounted for 21% of reported HIV cases compared to 29% in 1999 and 34% in 2000. (See Figure 3.25)

Figure 3.25 Percent Reported HIV cases, by Race/Ethnicity and Year of Diagnosis: MA, Before 1999, 1999 & 2000 Data



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

Table 3.23 Number and Percent of Reported HIV Cases by Exposure Mode[1] and Year of Diagnosis: MA, 1990-2000

Data as of July 1, 2001

Number	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
Before 1999	1,411	1,424	144	503	462	18	170	**4,132**
1999	206	204	15	99	122	2	49	**697**
2000	196	102	9	83	123	2	45	**560**

Percent	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR
Before 1999	34%	34%	3%	12%	11%	<1%	4%
1999	30%	29%	2%	14%	18%	<1%	7%
2000	35%	18%	2%	15%	22%	<1%	8%

1 See the Glossary for and explanation of Exposure Mode categories. MSM = male to male sex; IDU = injection drug use; MSM/IDU = male to male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Male to male sex accounts for 34% of HIV cases reported in MA since the implementation of HIV case reporting.
- In 2000, injection drug use (IDU) is the exposure for a smaller percent (18%) of HIV cases diagnosed and reported compared to earlier years.

Table 3.24 Number and Percent of Reported HIV Cases by Exposure Mode[1] and Year of Diagnosis *Among Males*: MA, 1990-2000
Data as of July 1, 2001

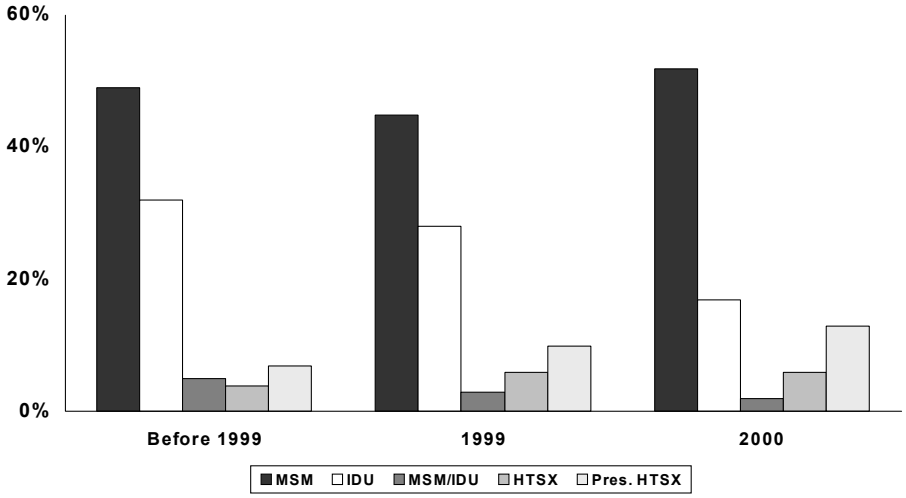
Number	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
Before 1999	1,411	914	144	116	192	11	101	**2,889**
1999	206	128	15	27	47	2	33	**458**
2000	196	66	9	22	50	2	35	**380**

Percent	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR
Before 1999	49%	32%	5%	4%	7%	0%	3%
1999	45%	28%	3%	6%	10%	0%	7%
2000	52%	17%	2%	6%	13%	1%	9%

1 See the Glossary for and explanation of Exposure Mode categories. MSM = male to male sex; IDU = injection drug use; MSM/IDU = male to male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- For males, male to male sex (MSM) accounts for approximately 50% of HIV exposures.
- In 2000, injection drug use (IDU) accounts for a smaller percentage (17%) of new HIV exposures diagnosed and reported compared to earlier years. (See Figure 3.26)

Figure 3.26 Percent of Reported HIV cases, by Exposure Mode and Year of Diagnosis, Among Males: MA 1999-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

Table 3.25 Number and Percent of Reported HIV Cases by Exposure Mode[1] and Year of Diagnosis *Among Females*: MA, 1990-2000
Data as of July 1, 2001

Number	IDU	HTSX	Pres. HTSX	Other	NIR	Total
Before 1999	510	387	270	7	69	**1,243**
1999	76	72	75	0	16	**239**
2000	36	61	73	0	10	**180**

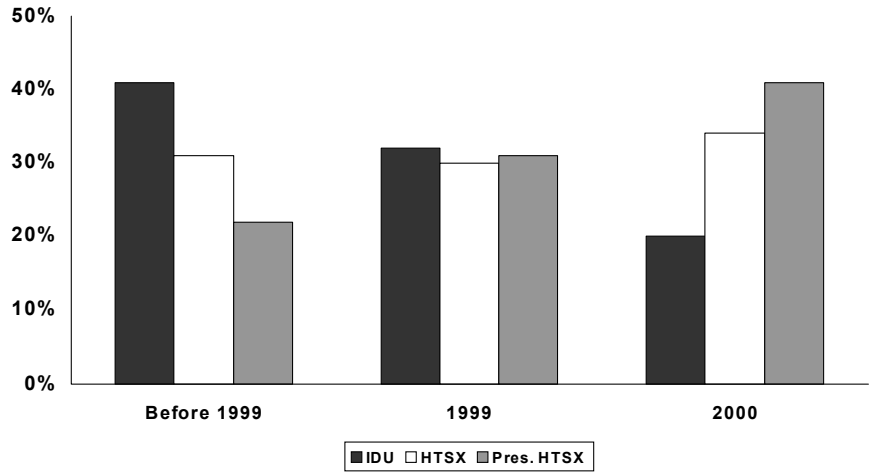
Percent	IDU	HTSX	Pres. HTSX	Other	NIR
Before 1999	41%	31%	22%	1%	6%
1999	32%	30%	31%	0%	7%
2000	20%	34%	41%	0%	6%

1 See the Glossary for and explanation of Exposure Mode categories. IDU = injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Heterosexual sex (HTSX) and presumed heterosexual sex (Pres. HTSX) account for the largest percentage of HIV cases diagnosed and reported for women in 2000.

- The percentage of HIV exposures among women ascribed to injection drug use (20%) is less than in prior years. (Note: Caution should be used in interpreting dramatic increases or decreases from one year to the next. Reporting artifacts, such as underreporting of cases in certain risk categories, may account for these differences, particularly in more recent years.) (See Figure 3.27)

Figure 3.27 Percent of Reported HIV cases, by Exposure Mode and Year of Diagnosis, Among Females: MA 1999-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

IV. AIDS Mortality Data (HIV/AIDS Case Data)

The death data presented in this analysis include all deaths among people reported with AIDS in Massachusetts. Approximately 20% of these deaths were due to causes that were not related to the persons HIV infection such as car crashes, heart failure, non-HIV related cancers, drug overdoses, homicide and suicide.

Over time there has been a dramatic decline in the number of deaths among people reported with AIDS. This decline is likely due to advancements in HIV/AIDS care and treatment that have helped some people live longer with HIV/AIDS.

Trends in mortality from HIV/AIDS reflect shifts in HIV infection and AIDS diagnoses. Differences in the natural course of the disease among populations, higher incidence of co-morbidity within some groups, and higher incidence of other immuno-compromising diseases may also play a role in differential mortality experience across subgroups.

Since 1990, females have accounted for an increasing proportion of deaths. Across race/ethnicity, there has been a decrease in the percentage of deaths that are among Whites and an increase among Blacks and Hispanics. Regarding exposure mode, there has been a sustained increase in the percentage of deaths that are among injection drug users and a decrease in the percentage among men who have sex with men. This trend in mortality mirrors the trend seen in AIDS incidence.

Table 3.26 Deaths among Persons Reported with AIDS by Gender and Year of Death: MA, 1990 - 2000

Data as of July 1, 2001

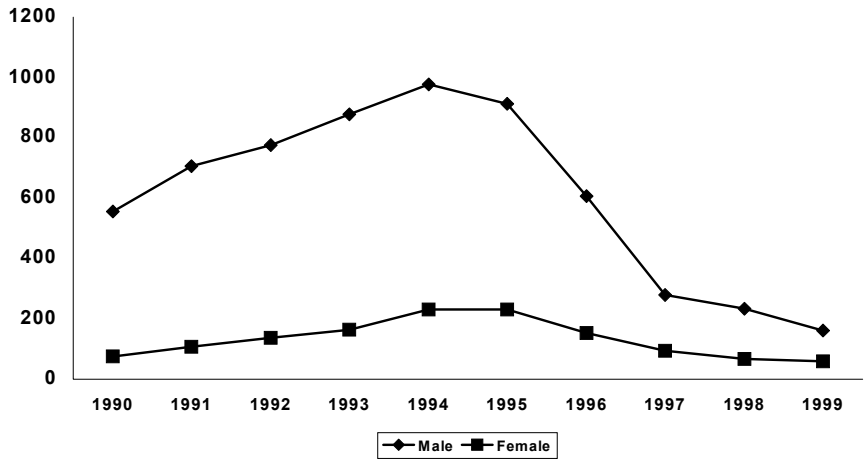
	Male		Female		Total
Year	**N**	**%**	**%**	**N**	
1990	555	88%	76	12%	**631**
1991	707	87%	107	13%	**814**
1992	776	85%	136	15%	**912**
1993	877	84%	165	16%	**1,042**
1994	976	81%	231	19%	**1,207**
1995	912	80%	231	20%	**1,143**
1996	606	80%	154	20%	**760**
1997	280	75%	95	25%	**375**
1998	233	78%	67	22%	**300**
1999	162	74%	58	26%	**220**
2000[1]	85	71%	34	29%	**119**

1 2000 Death Data are preliminary
Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Deaths among people with AIDS in MA peaked in 1994 with 1,207 deaths.

- From 1994 to 1999, annual deaths among people with AIDS decreased by 82%.
- The number of females with AIDS who died in MA peaked in 1995 at 231. (See Figure 3.28)
- From 1994 to 2000, deaths among females with AIDS decreased by 75%.
- Over time, females account for an increasing percentage of people who are dying with AIDS (12% in 1990 compared to 29% in 2000).
- Deaths among males with AIDS peaked at 976 in 1994 and decreased by 83% to 162 in 1999. (See Figure 3.28)

Figure 3.28 Number of Deaths among Persons Reported with AIDS by Gender and Year of Death: MA, 1990-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

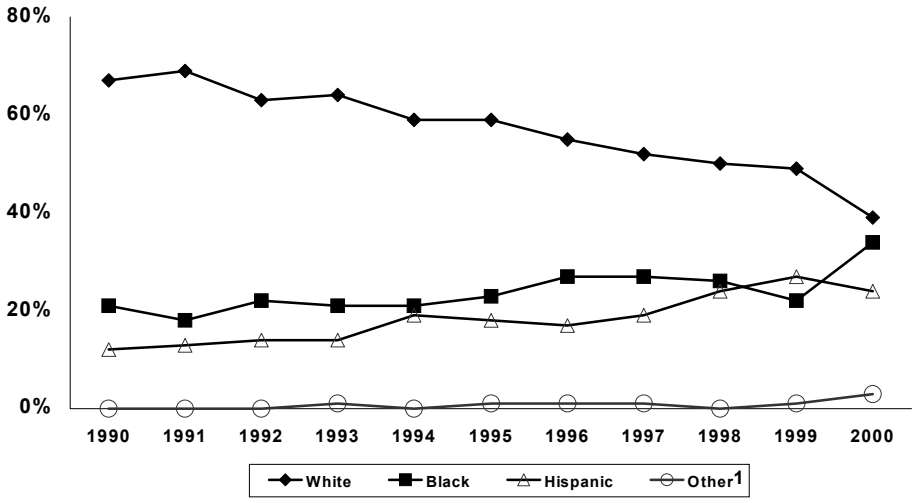
Table 3.27 Percent of Deaths among Persons Reported with AIDS by Race/Ethnicity and Year of Death: MA, 1990 - 2000
Data as of July 1, 2001

Year	White NH	Black NH	Hispanic	Other[1]	Unknown	Total
1990	67%	21%	12%	0%	0%	**631**
1991	69%	18%	13%	<1%	0%	**814**
1992	63%	22%	14%	<1%	0%	**912**
1993	64%	21%	14%	1%	<1%	**1,042**
1994	59%	21%	19%	<1%	<1%	**1,207**
1995	59%	23%	18%	1%	<1%	**1,143**
1996	55%	27%	17%	1%	0%	**760**
1997	52%	27%	19%	1%	0%	**375**
1998	50%	26%	24%	0%	0%	**300**
1999	49%	22%	27%	1%	0%	**220**
2000[2]	39%	34%	24%	3%	0%	**119**

1 Other includes Asian/Pacific Islander and American Indian/Alaska Native
2 2000 Death Data are preliminary
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Over time, people of color account for an increasing proportion of deaths among people with AIDS.
- In 1990, Whites accounted for 67% of deaths among people with AIDS compared to 33% for people of color (21% Blacks and 12% Hispanics). (See Figure 3.29)
- By comparison, in 1999, Whites accounted for 49% of deaths among people with AIDS compared to 58% for people of color (22% Black and 27% Hispanic). (See Figure 3.29)

Figure 3.29 Percent of Deaths among Persons Reported with AIDS by Race/Ethnicity and Year of Death: MA, 1990-2000



1 Other includes Asian/Pacific Islander and American Indian/Alaska Native; Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

Table 3.28 Number of Deaths among Persons Reported with AIDS, by Mode of Exposure[1] and Year of Death: MA, 1990-2000

Data as of July 1, 2001

Year	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
1990	352	154	27	25	29	27	17	**631**
1991	419	219	33	43	35	45	20	**814**
1992	445	292	35	48	33	33	26	**912**
1993	459	339	53	75	41	36	39	**1,042**
1994	453	464	48	105	53	40	44	**1,207**
1995	430	431	36	130	28	41	47	**1,143**
1996	254	315	29	79	34	20	29	**760**
1997	93	175	20	46	6	14	21	**375**
1998	78	161	7	25	11	2	16	**300**
1999	41	110	7	19	21	10	12	**220**
2000[2]	20	68	5	6	7	7	6	**119**

1 See the Glossary for and explanation of Exposure Mode categories. MSM = male to male sex; IDU = injection drug use; MSM/IDU = male to male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
2 2000 Death Data are preliminary
Data Source: MDPH HIV/AIDS Surveillance Program

- From 1990 to 1993 men whose mode of exposure was male to male sex accounted for the largest number of deaths among people reported with AIDS.
- In 1994, the number of deaths among persons with AIDS where injection drug use was the mode of exposure (464) surpassed the number of deaths where male to male sex was the mode of exposure (453).
- From 1993 to 1999 the number of deaths among people with AIDS who reported male to male sex decreased by 91%.
- From 1994 to 1999 the number of deaths among people with AIDS who reported injection drug use decreased by 76%.
- In 1995 deaths among people with AIDS who reported heterosexual sex peaked at 130 deaths.

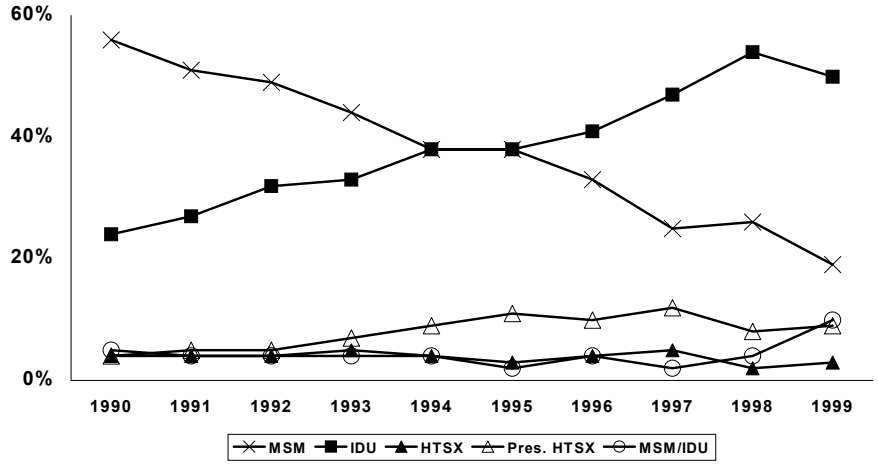
Table 3.29 Percent of Deaths among Persons Reported with AIDS, by Mode of Exposure[1] and Year of Death: MA, 1990-2000
Data as of July 1, 2001

Year	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR
1990	56%	24%	4%	4%	5%	4%	3%
1991	51%	27%	4%	5%	4%	6%	2%
1992	49%	32%	4%	5%	4%	4%	3%
1993	44%	33%	5%	7%	4%	3%	4%
1994	38%	38%	4%	9%	4%	3%	4%
1995	38%	38%	3%	11%	2%	4%	4%
1996	33%	41%	4%	10%	4%	3%	4%
1997	25%	47%	5%	12%	2%	4%	6%
1998	26%	54%	2%	8%	4%	1%	5%
1999	19%	50%	3%	9%	10%	5%	5%
2000[2]	17%	57%	4%	5%	6%	6%	5%

1 See the Glossary for and explanation of Exposure Mode categories. MSM = male to male sex; IDU = injection drug use; MSM/IDU = male to male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk.
2 2000 Death Data are preliminary
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- From 1990 to 1999, male to male sex (MSM) as a mode of exposure has accounted for a decreasing percentage of deaths among people reported with AIDS (56% of deaths in 1990 and 19% of deaths in 2000). (See Figure 3.30)
- By comparison, from 1990 to 1999, injection drug use as a mode of exposure has accounted for an increasing percentage of deaths among people reported with AIDS (24% of deaths in 1990 and 50% of deaths in 1999). (See Figure 3.30)

Figure 3.30 Percent of Deaths among Persons Reported with AIDS by Mode of Exposure and Year of Death: MA, 1990-2000



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2001

V. Pediatric Spectrum of Disease Data (Pediatric HIV/AIDS case data)

The data in this section are provided by the Massachusetts Pediatric Spectrum of Disease (PSD) Project and describe the pediatric HIV/AIDS epidemic. While the HIV/AIDS case data described elsewhere in this report from the MDPH HIV/AIDS Surveillance Program include pediatric AIDS data, PSD is the only source of pediatric HIV data. PSD is a population-based project that collects data for all HIV-infected and perinatally exposed children whose mothers are known to be HIV-infected. Children are enrolled in the PSD data collection system at birth, or when HIV infection in the child is diagnosed. After enrollment, a follow-up form is completed on children every six months. Follow-up forms are stopped once a child is determined to be uninfected, or when a child dies or moves out of Massachusetts.

Improved prenatal HIV counseling and testing and expanded access to effective treatments have greatly increased the likelihood that women with HIV will deliver healthy babies. Perinatal transmission of HIV, i.e. transmission of HIV from an infected mother to her newborn, has diminished considerably in the last decade. According to PSD data, from 1990 to 1998 the percentage of children perinatally infected with HIV decreased from 33% to 8%. The percentage of HIV positive mothers who knew their HIV status before giving birth has increased from 71% in 1990 to 96% in 2000. Of women in Massachusetts who knew their HIV positive status before giving birth in year 2000, 95% received some antiretroviral therapy during pregnancy and/or labor and delivery. Of all HIV positive women who gave birth in MA in 2000, 53% were U.S.-born, 13% were from a U.S. Dependency and 23% were non-U.S. born (from Africa, Haiti and Brazil). Continued improvement in HIV counseling, testing and treatment for pregnant women is increasingly important as the number of women of reproductive age living with HIV rises.

Table 3.30 Children Living with HIV Infection/AIDS who were Diagnosed Before Age 13 by Gender, Race/Ethnicity, & Current Age: MA[1]

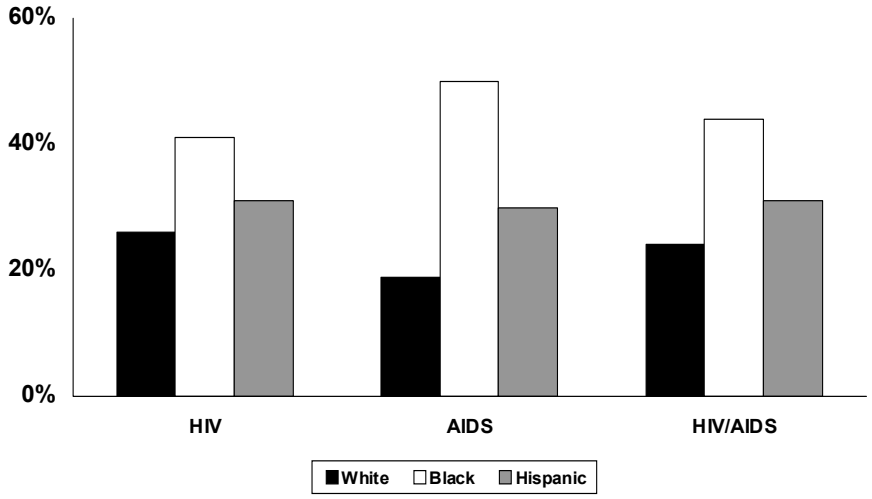
Data as of July 1, 2001

	HIV		AIDS		HIV/AIDS	
Gender:	N	%	N	%	N	%
Male	100	52%	40	54%	140	53%
Female	92	48%	34	46%	126	47%
Race/Ethnicity:	N	%	N	%	N	%
White	50	26%	14	19%	64	24%
Black	79	41%	37	50%	116	44%
Hispanic	60	31%	22	30%	82	31%
Other/NIR	3	2%	1	1%	4	2%
Current Age:	N	%	N	%	N	%
0-5	32	17%	6	8%	38	14%
6-10	83	43%	25	34%	108	41%
11-15	63	33%	32	43%	95	36%
16-21	14	7%	11	15%	25	9%

1 Pediatric cases living in MA (some may have been born outside MA) including non-Perinatal transmissions (i.e. hemophiliac, blood transfusion, etc.)
Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2001

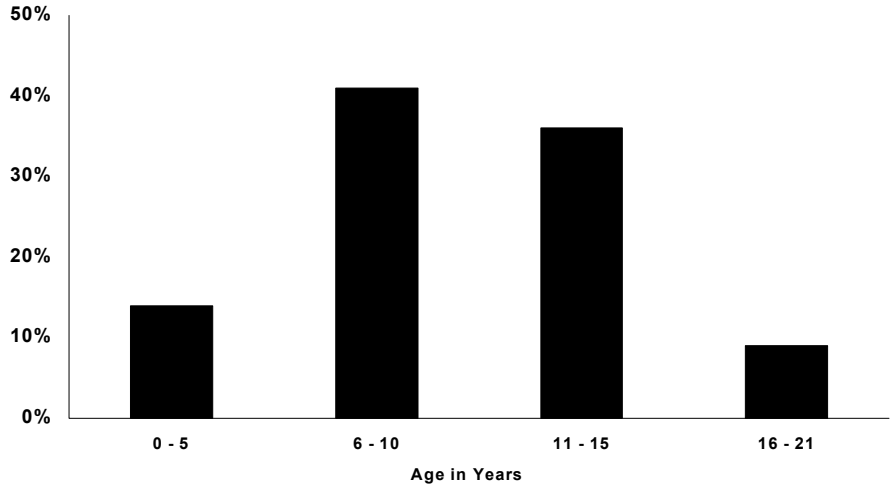
- The largest proportion of people living with HIV infection/AIDS who were diagnosed before age 13 are Black (44%), followed by Hispanic (31%). (See Figure 3.31)
- The majority of people living with HIV infection/AIDS who were diagnosed before 13 years of age (77%) are currently between 6 and 15 years of age. (See Figure 3.32)

Figure 3.31 Children Living with HIV Infection and AIDS who were Diagnosed Before Age 13 by Race/Ethnicity: MA Data as of July 01, 2001



Data Source:Pediatric Spectrum of Disease (PSD)

Figure 3.32 Children Living with HIV Infection and AIDS who were Diagnosed Before Age 13 by Current Age: MA Data as of July 01, 2001



Data Source:Pediatric Spectrum of Disease (PSD)

Table 3.31 Characteristics of Births to HIV Positive Mothers: MA 1990,1995 and 2000[1]

Year of Birth:	1990		1995		2000	
Total Number of Births to HIV-Infected Mothers:	94		100		85	
When Mother's HIV Infection was Diagnosed:	**N**	**%**	**N**	**%**	**N**	**%**
Before Child's Birth	67	71%	78	78%	82	96%
After Child's Birth	24	26%	22	22%	2	--[3]
Unknown	3	--[3]	0	--[3]	1	--[3]
Anti-Retroviral Therapy[2] for Mothers Diagnosed Before Child's Birth:	**N**	**%**	**N**	**%**	**N**	**%**
Yes	--	--	70	90%	78	95%
No	--	--	2	--[3]	2	--[3]
Unknown	--	--	6	8%	2	--[3]
Mode of Delivery:	**N**	**%**	**N**	**%**	**N**	**%**
Caesarian Section	10	11%	20	20%	47	55%
Vaginal	77	82%	79	79%	37	44%
Unknown	7	7%	1	--[3]	1	--[3]
Infection Status of Child:	**N**	**%**	**N**	**%**	**N**	**%**
Infected	31	33%	20	20%	3	--[3]
Not Infected	62	66%	77	77%	25	29%
Unknown	1	--[3]	3	--[3]	57	67%[4]

1 Population includes only mothers of children with diagnosed HIV infection or exposure. MA births only
2 This includes any therapy during pregnancy and/or during labor and delivery.
3 Calculations based on fewer than 5 events are excluded.
4 Due to the preliminary nature of these data the infection status of the child is still unknown for the majority of cases. For reference, of 86 children born to HIV positive mothers in 1998, 7 (8%) were infected, 67 (77%) were not infected, and the infection status was unknown for 12 (14%).
Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2001

- The percentage of HIV positive mothers who knew their HIV status before giving birth has increased from 71% in 1990 to 96% in 2000.
- Of women who knew their HIV positive status before giving birth in MA in 2000, 95% received antiretroviral therapy during pregnancy and/or during labor and delivery.

- There has been a decrease in perinatal transmission of HIV over time.
- There has been an increase in Caesarian sections over time from 11% of births to HIV positive mothers in 1990 to 55% in 2000.

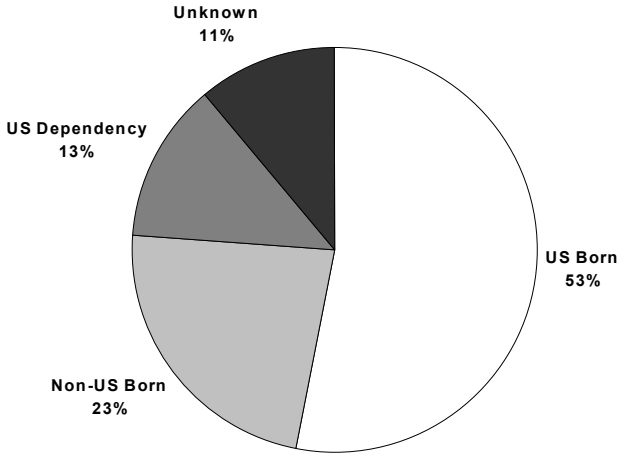
Table 3.32 Maternal Characteristics[1] of HIV Positive Women Who Gave Birth: MA[2], 2000

Mother's Risk:	N	%
IDU	23	27%
Sex w/IDU	6	7%
Sex/Male/HIV/AIDS	10	12%
Transfusion	1	--[4]
No Identified Risk	45	53%
Maternal Age:	**N**	**%**
<20	3	--[4]
20-34	64	76%
35+	15	18%
Unknown age at delivery	3	--[4]
Maternal Race/Ethnicity:	**N**	**%**
White	26	30%
Black	32	38%
Hispanic	23	27%
Other/Unknown	4	--[4]
Maternal Birthplace:	**N**	**%**
US	45	53%
US Dependency	11	13%
Non-US[3]	20	23%
Unknown	9	11%
Total	**85**	**100%**

1 Data represents mothers of children with perinatal exposure to HIV only (not children exposed from other sources i.e. hemophilia, transfusion, etc.)
2 Births in MA only
3 Includes Central African Rep., Uganda, Haiti, Brazil, Rwanda, Zaire, Angola, Burundi, Nigeria, Cape Verde Island, Zimbabwe, Cameroon, and Ghana
4 Calculations based on fewer than 5 events are excluded.
Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2001

- A third (34%) of women living with HIV infection who gave birth in MA in 2000 had an HIV risk related to injection drug use (injection drug use and sex with an injection drug user combined); 53% had no identified risk.
- The majority (65%) of women living with HIV infection who gave birth in MA are people of color (38% Black and 27% Hispanic).
- 36% of women living with HIV infection who gave birth were born either outside the US (23%) or in a US dependency (13%). (See Figure 3.33)

Figure 3.33 Women Living with HIV Infection who Gave Birth by Maternal Country of Origin: MA, 2000



Data Source: Pediatric Spectrum of Disease (PSD)

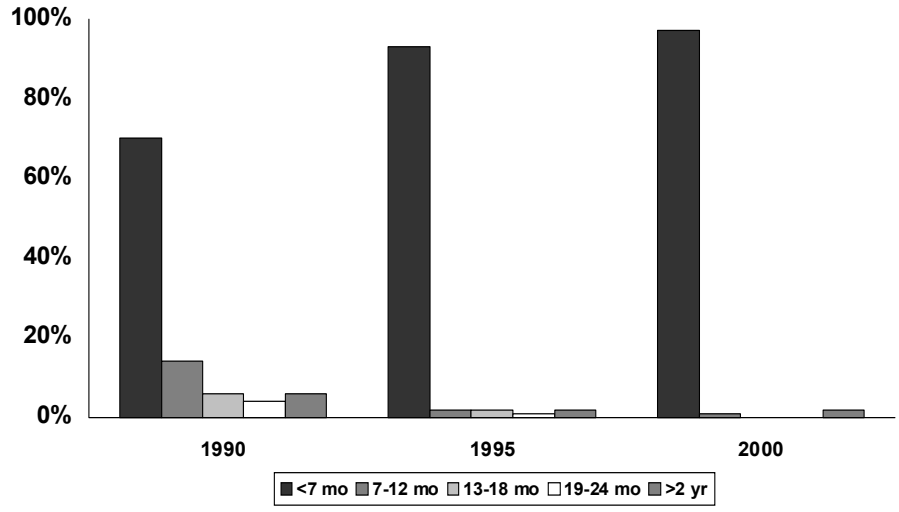
Table 3.33 Age of Child at the Time of Initial HIV/AIDS Evaluation[1]: 1990,1995, and 2000, MA

Year of Initial HIV/AIDS Evaluations:	1990		1995		2000	
Age of Child at Evaluation for HIV/AIDS	N	%	N	%	N	%
<7 Months	75	70%	90	93%	86	97%
7-12 Months	15	14%	2	--[2]	1	--[2]
13-18 Months	6	6%	2	--[2]	0	--[2]
19-24 Months	4	--[2]	1	--[2]	0	--[2]
>2 Years	7	6%	2	--[2]	2	--[2]
Total	**107**		**97**		**89**	

1 For children born in MA only who had perinatal exposure (or presumed to have had perinatal exposure)
2 Calculations based on fewer than 5 events are excluded.
Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2001

- Age at initial HIV/AIDS evaluation for children born in MA has decreased over time with 97% in year 2000 being done at/under age six months. (See Figure 3.34)

Figure 3.34 Age of Child at Time of Initial HIV/AIDS Evaluation: MA, 1990, 1995, 2000



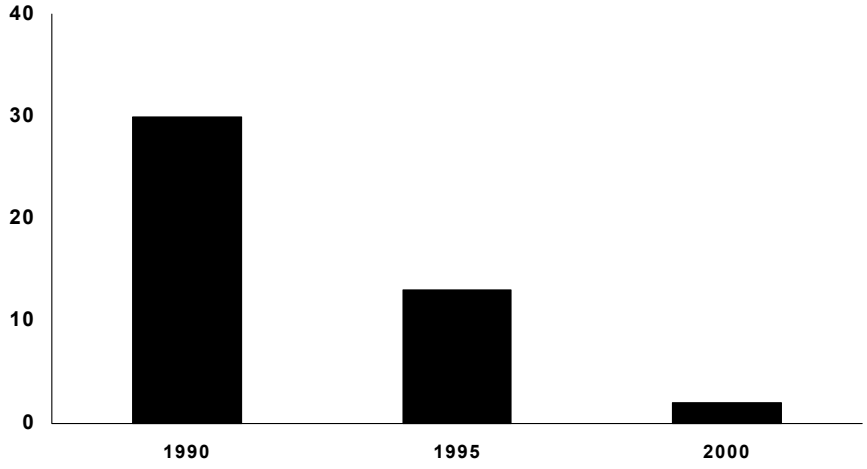
Data Source: Pediatric Spectrum of Disease (PSD)

Table 3.34 Perinatal AIDS Diagnoses by Year: MA, 1990, 1995, 2000			
	1990	1995	2000
Number of Perinatal HIV-Infected Children Diagnosed with AIDS	30	13	2

Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2001

- The number of children newly diagnosed with AIDS has dropped dramatically in the last decade. In 1990, there were 30 perinatally HIV-infected children diagnosed with AIDS. In 2000, there were 2. (See Figure 3.35)

Figure 3.35 Number of Perinatal AIDS Diagnoses by Year: MA, 1990, 1995, 2000



Data Source:Pediatric Spectrum of Disease (PSD)

Table 3.35 Median Age of Perinatally HIV Infected Children in Care: MA, 1990, 1995, 2000

	1990	1995	2000
Total Number of Actively Followed Children	131	235	263
Median Age	2.8 yrs	5.4 yrs	9.3 yrs

Data Source: Pediatric Spectrum of Disease (PSD), Data as of 07/01/2001

- The median age of actively followed HIV-infected children in PSD continues to rise with the median age in 1990 being 2.8 years and the median age being 9.3 years a decade later.

VI. Seroprevalence Data (Unlinked HIV Seroprevalance program)

The following table contains data on HIV and syphilis seropositivity (the percent of clients who tested positive for HIV or syphilis) at three publicly funded STD clinics. As these data are collected from only three selected STD sites in patients presenting with STD concerns, they are not representative of the general Massachusetts population. However, they do provide some indication of the prevalence of HIV and syphilis in a specific population of people who are presumably engaging in unprotected sex.

Table 3.36 Unlinked[1] HIV and Syphilis Seropositivity at Three Publicly Funded STD Clinics[2] : MA, 1990 – 2000

By Year:	TOTAL TESTS	% HIV POSITIVE	% SYPHILIS POSITIVE
1990	4,075	4%	8%
1991	4,633	3%	7%
1992	4,053	3%	5%
1993	3,339	3%	4%
1994	2,705	2%	5%
1995	2,554	2%	4%
1996	2,390	3%	3%
1997	2,214	3%	4%
1998	2,369	3%	4%
1999	2,069	3%	3%
2000	2,005	2%	3%

1 Information is collected in a way that preserves anonymity but allows analysis by selected variables
2 Tests performed at 3 selected publicly funded STD clinic sites. (People also test for HIV and Syphilis at non-publicly funded sites for whom data are not represented in this table)
Data Source: MDPH Unlinked HIV Seroprevalence Program

- HIV and syphilis seropositivity at publicly funded STD clinics has dropped steadily during the 1990's.
- HIV seroprevalence has decreased two-fold, and the syphilis seroprevalence has decreased two-fold as well.

VII. Sexually Transmitted Diseases (STDs) (STD Case Data)

The following tables contain data on Chlamydia, Gonorrhea, and Syphilis which are three sexually transmitted diseases that are reported to the state. Rates of STDs can be used as an indication of unprotected sex as well as other factors such as access to health care and prevention services. Additionally, it has been found that the presence of an STD may facilitate HIV transmission. Thus, early detection and treatment of STDs can have an impact on preventing sexual transmission of HIV.

Table 3.37 Number of Reported Chlamydia Cases by Gender and Year of Diagnosis: MA, 1990-2000

By Year:	Male	Female	Total
1990	1,922	10,327	12,249
1991	1,741	9,144	10,885
1992	1,564	8,241	9,805
1993	1,298	7,032	8,330
1994	1,198	6,850	8,048
1995	1,165	6,237	7,402
1996	1,039	5,674	6,713
1997	1,336	5,931	7,267
1998	1,549	6,842	8,391
1999	1,820	6,981	8,801
2000	2,315	7,758	10,073

Data Source MDPH Division of STD Prevention

- Reported chlamydia infection decreased by 45% between 1990 and 1996.
- Increases in reported chlamydia infection between 1996 and 2000 is, in great part, due to increases in screening of asymptomatic women, and more recently in men, and new more sensitive testing methodologies.

Table 3.38 Chlamydia Rates per 100,000 by Race/Ethnicity and Year of Diagnosis: MA, 1990-2000

By Year:	WHITE NH	BLACK NH	HISPANIC	TOTAL MA RATE/100,000
1990	54	600	373	204
1991	47	612	363	181
1992	42	565	347	163
1993	37	546	405	138
1994	34	532	419	134
1995	33	528	455	123
1996	32	532	459	113
1997	28	544	448	122
1998	33	626	539	139
1999	35	669	639	146
2000	39	833	775	167

NH = Non-Hispanic
Data Source MDPH Division of STD Prevention

- The chlamydia infection rate for the state declined from 1990 (204 cases per 100,000 population) to 1996 (113 cases per 100,000 population) and then rose to 167 cases per 100,000 in 2000. Again, this is due in great part to increases in screening of asymptomatic women, and more recently men, and new more sensitive testing methodologies.
- The chlamydia infection rates among Blacks (833 cases per 100,000) and Hispanics (775 cases per 100,000) are approximately 20 times higher than the rate for Whites (39 cases per 100,000 population).
- From 1990 to 2000, the chlamydia rate has increased by one-third for Blacks and has doubled for Hispanics. (Note: Caution should be used in interpreting sudden increases or decreases from one year to the next. Recent increases in chlamydia screening efforts, as well as the introduction of more sensitive nucleic acid amplified test technology (NAAT), may account for the sudden apparent increase in new chlamydia infections.)

Table 3.39 Number of Reported Gonorrhea Cases by Gender and Year of Diagnosis: MA, 1990-2000

By Year:	Male	Female	Total
1990	4,339	3,188	7,527
1991	3,376	2,603	5,979
1992	2,006	1,574	3,580
1993	1,681	1,418	3,099
1994	1,597	1,559	3,156
1995	1,394	1,222	2,616
1996	1,019	1,114	2,133
1997	993	1,052	2,045
1998	1,106	1,155	2,261
1999	1,250	1,213	2,463
2000	1,354	1,422	2,776

Data Source MDPH Division of STD Prevention

- The total number of reported gonorrhea infections declined by 73 percent from 1990 (7,527) through 1997 (2,045).
- From 1997 to 2000, the number of reported cases increased for both males (by 36%) and females (by 35%).

Table 3.40 Gonorrhea Rates per 100,000 by Race/Ethnicity and Year of Diagnosis: MA, 1990-2000

By Year:	WHITE NH	BLACK NH	HISPANIC	TOTAL MA RATE/100,000
1990	23	1,212	246	125
1991	19	920	199	99
1992	13	455	127	60
1993	13	406	106	52
1994	12	395	115	52
1995	12	329	112	44
1996	8	298	109	36
1997	6	280	103	35
1998	8	271	106	38
1999	9	301	137	41
2000	10	355	143	46

NH = Non-Hispanic
Data Source MDPH Division of STD Prevention

- The gonorrhea infection rate for the state declined from 1990 (125 cases per 100,000 population) to 1997(35 cases per 100,000) and then rose to 46 cases per 100,000 in 2000
- From 1990 through 2000 the gonorrhea infection rate decreased by 71 percent for Blacks, 56 percent for Whites, and 42 percent for Hispanics.
- Despite the overall decline in infection rates, the disparity between Whites and racial/ethnic minorities is still evident. In 2000, the rate of infection for Blacks (355 cases per 100,000) was thirty-six times that of Whites and the rate of infection for Hispanics (143 cases per 100,000) was fourteen times that of Whites.

Table 3.41 Number of Reported Syphilis Cases by Gender and Year of Diagnosis: MA, 1990-2000

By Year:	Male	Female	Total
1990	965	738	1,703
1991	771	623	1,394
1992	572	471	1,043
1993	501	433	934
1994	338	281	619
1995	296	209	505
1996	355	274	629
1997	408	270	678
1998	329	243	572
1999	236	151	387
2000	259	158	417

Data Source MDPH Division of STD Prevention

- The total number of reported syphilis infections declined by 77% from 1990 through 1999, but in 2000 there was an 8% increase.
- In the past ten years, the number of reported infections among males declined by about 75 percent and the number of reported infections among females declined by 80 percent.
- Over the past decade more males than females have been diagnosed with syphilis and in 2000 there were 64% more cases reported among males than females.

Table 3.42 Syphilis Rates per 100,000 by Race/Ethnicity By Year of Diagnosis: MA, 1990-2000

By Year:	WHITE NH	BLACK NH	HISPANIC	TOTAL MA RATE/100,000
1990	6	216	144	28
1991	4	183	119	23
1992	4	113	109	17
1993	2	80	88	16
1994	2	62	59	10
1995	1	67	56	8
1996	2	81	74	11
1997	2	89	74	11
1998	1	80	60	10
1999	1	53	42	6
2000	1	47	45	7

NH = Non-Hispanic
Data Source MDPH Division of STD Prevention

- Overall, the reported syphilis infection rate for the state has decreased by 75 percent from 1990 through 2000.
- The reported syphilis infection rate for all three groups has declined over the past ten years.
- From 1990 through 2000 the reported infection rate decreased by 78 percent for Blacks and 69 percent for Hispanics.
- Despite the overall decline in reported infection rates, the disparity between Whites and racial/ethnic minorities is still evident. In 2000, the rate of infection for Blacks (47 cases per 100,000) was forty-seven times that of Whites and the rate of infection for Hispanics (45 cases per 100,000) was forty-five times that of Whites.

VIII. Behavioral Data (Behavioral Risk Factor Surveillance System – BRFSS)

The following tables include behavioral data about HIV testing, number of sexual partners and condom use as reported by Massachusetts residents to the state through telephone interviews. HIV testing can be used as an approximate indicator of HIV risk behavior in a population, with the assumption that those who choose to be tested for HIV are engaging in a behavior which would put them at risk. Sex with multiple partners is an important indicator for HIV risk, as those who have sex with multiple people are more likely to be exposed to HIV, and if they are infected, they are more likely to expose others. Condom usage is a prevention method for the sexual transmission of HIV. Use or non-use within a population can indicate differing levels of HIV risk, and HIV behaviors.

Table 3.43 HIV Testing Among Adults Ages 18-64: MA, 2000

By Age:	Percent Ever Tested	Percent Tested in Past Year	Total Interviewed
18-24	42%	23%	692
25-34	66%	21%	1,668
35-44	54%	14%	1,831
45-64	34%	9%	2,263
Total:			**6,454**

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2000

- Among 6,525 respondents to the 2000 BRFSS, 48% reported ever testing for HIV and 15% reported being tested in the past year.
- The largest proportion of those ever testing was among 25-34 year olds (66%) and the smallest among 45-64 year olds (34%).
- Among those testing in the past year, the greatest proportion was among 18-24 year olds (23%) and smallest among 45-65 year olds (9%).

Table 3.44 Number Of Sexual Partners In Past Year Among Adults Ages 18-64 Years: MA, 2000

	0 Partners	1 Partner	2 Partners	3+ Partners	N
Total:	**18%**	**73%**	**5%**	**4%**	**4,325**
By Age:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
18-24	20%	55%	14%	12%	496
25-34	11%	77%	7%	5%	1,141
35-44	13%	81%	4%	2%	1,184
45-64	26%	70%	1%	2%	1,476
Sex:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
Male	14%	72%	7%	7%	1,796
Female	21%	74%	3%	2%	2,529
Race:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
White	16%	75%	5%	4%	3,318
Black	23%	64%	6%	6%	261
Hispanic	34%	58%	6%	3%	575
Asian	29%	68%	3%	0%	103
HIV Test Ever:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
Yes	13%	75%	7%	5%	2,201
No	23%	70%	3%	3%	2,018

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2000

- Among 6,525 respondents to the 2000 MA BRFSS, 4% reported three or more partners in the past year, 5% reported 2 partners, 73% reported 1 partner, and 18% reported no sexual partners in the past year.
- The largest proportions of people reporting 3 or more partners were among young people (12% of 18-24 year olds reported 3 or more partners) and males (7% of men reported 3 or more partners compared to 2% of females).
- 5% of those who reported having an HIV test report 3 or more partners and 75% report 1 partner.

Table 3.45 Number Of Sexual Partners In The Past Year, *Males* Ages 18-64: MA, 2000

	0 Partners	1 Partner	2 Partners	3+ Partners	N
Total Males	**14%**	**72%**	**7%**	**7%**	**1,796**
Age:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
18-24	18%	48%	15%	19%	202
25-34	12%	69%	9%	10%	458
35-44	14%	74%	6%	6%	515
45-64	18%	73%	4%	5%	614
Race:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
White	13%	71%	7%	8%	1,398
Black	16%	60%	11%	12%	104
Hispanic	30%	60%	4%	6%	203
Asian	27%	65%	8%	0%	49
Sex of Partner[1]:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
Same	0%	54%	10%	36%	92
Opposite	0%	84%	8%	8%	1,418

[1] Only asked of sexually active adults
Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2000

- 19% of males ages 18-24 reported 3 or more sexual partners compared to 10% of males ages 25-34, 6% of males ages 35-44, and 5% of males ages 45-64.

Table 3.46 Number of Sexual Partners In the Past Year, *Females* Ages 18-64

	0 Partners	1 Partner	2 Partners	3+ Partners	N
Total Females	**21%**	**74%**	**3%**	**2%**	**2,529**
Age:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
18-24	18%	63%	12%	6%	293
25-34	13%	78%	6%	3%	683
35-44	19%	78%	3%	4%	669
45-64	42%	57%	1%	0%	862
Race:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
White	22%	72%	4%	2%	1,896
Black	29%	65%	5%	1%	156
Hispanic	41%	54%	4%	1%	371
Asian	26%	72%	0%	2%	53
Sex of Partner[1]:	**0 Partners**	**1 Partner**	**2 Partners**	**3+ Partners**	**N**
Same sex	0%	82%	13%	6%	55
Opposite sex	0%	92%	5%	2%	1,819

[1] Only asked of sexually active adults
Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2000

- 6% of females ages 18-24 reported 3 or more sexual partners compared to 4% of females ages 25-34, 3% of females ages 35-44, and less than 1% of females ages 45-64.

Table 3.47 Condom Use At Last Sexual Encounter, Adults Age 18-64[1]: MA, 2000

	Total N	% Used Condom
Total:	**3,415**	**25%**
Sex:	**Total N**	**% Used Condom**
Male	1,532	29%
Female	1,883	23%
Race:	**Total N**	**% Used Condom**
White	2,719	24%
Black	200	36%
Hispanic	362	27%
Asian	79	44%
Other	33	
Number of Partners:	**Total N**	**% Used Condom**
1	2,965	21%
2	231	60%
3+	190	59%
Sexual Orientation:	**Total N**	**% Used Condom**
Same Sex – Male	95	33%
Opp Sex – Male	1,436	28%
Same Sex – Female	55	15%
Opp Sex – Female	1,828	23%

1 Only asked of sexually active adults
Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2000

- Of 3,431 sexually active respondents to the BRFSS ages 18-64, 25% reported using a condom at last sexual encounter. (29% of male respondents and 23% of female respondents)
- 44% of Asians reported Condom use at last sexual encounter as opposed to 24% of Whites.
- Regarding sex with multiple partners, 59% of those reporting 3 or more partners also reported condom use at last sex.
- Of men reporting a same sex partner, 33% reported condom use at last sex, while 28% of men with opposite sex partners reported condom use at last sex.
- Of women reporting a same sex partner, 15% reported condom use at last sex, while 23% of women with opposite sex partners reported condom use.

IX. Service Utilization (Counseling and Testing Data)

Utilization data for primary prevention services describe populations who are at risk for HIV infection. Utilization data for HIV/AIDS services describe selected sub-populations of people living with HIV/AIDS who access a particular type of service. These data are not representative of the general Massachusetts population of people living with HIV/AIDS.

HIV testing can be used as an approximate indicator of HIV risk behavior in a population, with the assumption that those who choose to be tested for HIV are engaging in a behavior which would put them at risk. The following tables contain data on HIV testing behavior at state-funded counseling and testing sites. An estimated 30% of people who get tested for HIV get tested at one of these sites. Therefore, these data are not representative of all people testing for HIV in Massachusetts.

Table 3.48 Number and Percent of Positive HIV Tests[1] by Gender, Race/Ethnicity, Age of Client and Risk Category: MA, 2000

HIV Tests by Gender of Client:	Total Tests	Total Positive Results	Percent Positive
Male	27,029	337	1%
Female	19,288	165	1%
HIV Tests by Race/Ethnicity of Client:	**Total Tests**	**Total Positive Results**	**Percent Positive**
White	23,492	127	1%
African-American	6,317	129	2%
Latino	11,267	183	2%
Asian	778	8	1%
American Indian/Aleutian/Eskimo	187	1	1%
Haitian	660	16	2%
Brazilian	752	12	2%
Portuguese	768	3	<1%
Cape Verdean	549	5	1%
Unknown	1,547	18	1%
HIV Tests by Age of Client, in Years:	**Total Tests**	**Total Positive Results**	**Percent Positive**
Under 13	83	2	2%
13 to 19	4,039	11	<1%
20 to 24	10,560	47	<1%
25 to 29	8,001	58	1%
30 to 34	7,143	86	1%
35 to 39	6,192	124	2%
40 to 44	4,414	88	2%
45 to 49	2,561	40	2%
50+	2,387	35	1%
Unknown Age	937	11	1%
HIV Tests by Risk Category[2]:	**Total Tests**	**Total Positive Results**	**Percent Positive**
Male Sex w Male (MSM)	3,770	105	3%
Male to Male Sex and Injection Drug Use (MSM/IDU)	230	9	3%
Injecting Drug User (IDU)	5,929	78	1%
Heterosexual Sex (HTSX)	33,805	259	1%
Other/No Identified Risk	2,583	51	2%

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table); 2 Data collected on possible exposure on the C&T report form were aggregated using the CDC risk hierarchy in order to make these data more comparable to the HIV/AIDS case data. Refer to the Glossary for an explanation of risk categories. Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program.

- In 2000, more males (27,029) than females (19,288) received HIV counseling and testing at publicly funded counseling and testing (C&T) sites.
- The majority of those tested were White non-Hispanic (23,492) followed by Latinos (11,267) and African-Americans (6,317).
- More people in their 20s (20-29) were tested for HIV than in any other age category.
- The percent of total HIV tests that were positive was the same (1%) among males and females in 2000. (For males, the percent of positive HIV tests has declined from 4% in 1992; for females, the percent of positive HIV tests has declined from 2% in 1992. Data not shown.)
- More people under age 13 and between 30-39 years of age tested positive for HIV (2% respectively) than people between the ages of 13-24, 25-34 and 50+ (<1%, 1% and 1%, respectively).
- The majority of those tested reported heterosexual sex (33,805) as their risk followed by injection drug use (3,770) and male to male sex (2,583).
- The highest percentage of positive HIV tests was among clients reporting male to male sex as their risk (4%) followed by male to male sex/injection drug use (3%).

Table 3.49 HIV Tests[1] Where the Client Returned for Results by Gender, Race/Ethnicity, Age of Client and Risk Category: MA, 2000

HIV Tests by Gender of Client:	Total Tests	Total Returned for Results	Percent Returned
Male	27,029	20,793	77%
Female	19,288	13,597	70%
HIV Tests by Race/Ethnicity of Client:	**Total Tests**	**Total Returned for Results**	**Percent Returned**
White	23,492	17,805	76%
African-American	6,317	4,474	71%
Latino	11,267	8,240	73%
Asian	778	529	68%
American Indian/Aleutian/Eskimo	187	144	77%
Haitian	660	438	66%
Brazilian	752	588	78%
Portuguese	768	691	90%
Cape Verdean	549	436	79%
Unknown	1,547	1,045	68%

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table); Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program.

Table 3.49 (Continued) HIV Tests[1] Where the Client Returned for Results by Gender, Race/Ethnicity, Age of Client and Risk Category: MA, 2000

HIV Tests by Age of Client, in Years:	Total Tests	Total Returned for Results	Percent Returned
Under 13	83	26	31%
13 to 19	4,039	2,613	65%
20 to 24	10,560	7,460	71%
25 to 29	8,001	5,956	74%
30 to 34	7,143	5,531	77%
35 to 39	6,192	4,799	78%
40 to 44	4,414	3,432	78%
45 to 49	2,561	2,018	79%
50+	2,387	1,925	81%
Unknown Age	937	630	67%
HIV Tests by Risk Category[2]:	**Total Tests**	**Total Returned for Results**	**Percent Returned**
Male Sex w Male (MSM)	3,770	2,943	78%
Male to Male Sex and Injection Drug Use (MSM/IDU)	230	173	75%
Injecting Drug User (IDU)	5,929	4,587	77%
Heterosexual Sex (HTSX)	33,805	24,565	73%
Other/No Identified Risk	2,583	2,122	82%
Total	**46,317**	**34,390**	**74%**

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table); 2 Data collected on possible exposure on the C&T report form were aggregated using the CDC risk hierarchy in order to make these data more comparable to the HIV/AIDS case data. Refer to the Glossary for an explanation of risk categories. Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program.

- In 2000, 77% of male clients and 70% of female clients returned to receive their HIV test results at publicly funded HIV counseling and testing (C&T) sites.
- Haitians (66%) and Asians (68%) had the lowest return rates and Portuguese clients (90%) had the highest return rates.
- At least 70% of clients over 20 years of age returned to receive their HIV test results whereas only 65% of clients 13-19 years of age and only 31% of those under age 13 returned.
- The range of return rates was consistent across risk categories.

Table 3.50 Characteristics of HIV Tests Where the Client Returned for Results: MA, 2000

HIV Tests by Gender of Client:	N	%
Male	20,793	60%
Female	13,597	40%
HIV Tests by Race/Ethnicity of Client:	**N**	**%**
White	17,805	52%
African-American	4,474	13%
Latino	8,240	24%
Asian	529	2%
American Indian/Aleutian/Eskimo	144	<1%
Haitian	438	1%
Brazilian	588	2%
Portuguese	691	2%
Cape Verdean	436	1%
Unknown	1,045	3%
HIV Tests by Age of Client, in Years:	**N**	**%**
Under 13	26	<1%
13 to 19	2,613	8%
20 to 24	7,460	22%
25 to 29	5,956	17%
30 to 34	5,531	16%
35 to 39	4,799	14%
40 to 44	3,432	10%
45 to 49	2,018	6%
50+	1,925	6%
Unknown Age	630	2%
HIV Tests by Risk Category[2]:	**N**	**%**
Male Sex w Male (MSM2	2,943	9%
Male to Male Sex and Injection Drug Use (MSM/IDU)	173	1%
Injecting Drug User (IDU)	4,587	13%
Heterosexual Sex (HTSX)	24,565	71%
Other/No Identified Risk	2,122	6%

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table.); 2 Data collected on possible exposure on the C&T report form were aggregated using the CDC risk hierarchy in order to make these data more comparable to the HIV/AIDS case data. Refer to the Glossary for an explanation of risk categories. Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program (percentages may not add up to 100% due to rounding).

- In 2000, the racial/ethnic and risk distribution of clients who returned to receive their HIV test results at publicly funded HIV C&T sites was similar to the total population of clients tested.
- The gender distribution of returning clients was slightly different than the total population tested. In 2000, 58% of the total HIV C&T population was male and 42% was female. There were slightly more male returning clients (60%) and slightly less female returning clients (40%) than the total population tested.

Table 3.51 Number and Percent of HIV Tests[1] by Gender and Year of Test MA, 1992-2000

		Male	*Female*	Gender Not Reported
Year of Test	Total Number of Tests	% of Total Tests	% of Total Tests	% of Total Tests
1992	33,055	57%	43%	0%
1993	35,544	56%	43%	1%
1994	41,390	56%	43%	1%
1995	46,861	56%	43%	1%
1996	50,356	55%	44%	1%
1997	45,982	56%	43%	1%
1998	45,170	57%	42%	1%
1999	44,634	58%	41%	1%
2000	46,317	58%	42%	0%

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table). Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program (percentages may not add up to 100% due to rounding).

- The total number of HIV tests administered by publicly funded HIV C&T sites has increased by over 13,000 since 1992.
- About 15% more males than females were tested each year at HIV C&T sites from 1992 through 2000: In 2000 approximately 7,700 more males were tested at HIV C&T sites than females.

Table 3.52 Number and Percent of HIV Tests[1] by Race/Ethnicity and Year of Test MA, 1992-2000

		White	African American	Hispanic/ Latino	Asian	Portuguese
Year of Test	Total Tests	% of Total Tests	% of Total Tests	% of Total Tests	% of Total Tests	% of Total Tests
1992	33,055	72%	11%	11%	1%	<1%
1993	35,544	68%	11%	14%	1%	<1%
1994	41,390	64%	11%	17%	1%	1%
1995	46,861	59%	12%	18%	1%	2%
1996	50,356	56%	13%	20%	1%	2%
1997	45,982	56%	13%	21%	1%	2%
1998	45,170	54%	14%	22%	2%	2%
1999	44,634	53%	14%	22%	2%	1%
2000	46,317	51%	14%	24%	2%	2%

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table). Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program (percentages may not add up to 100% due to rounding).

- The proportion of White non-Hispanics receiving HIV tests at publicly funded HIV C&T sites has decreased from 72% to 51% of the total testing population from 1992 through 2000.
- Conversely, the proportion of Hispanic/Latinos receiving HIV tests at publicly funded HIV C&T sites has doubled from 1992 through 2000 (11% to 24%).
- The proportion of African Americans receiving HIV tests at publicly funded HIV C&T sites has increased by about 3% from 1992 through 2000.

Table 3.52 (Continued) Number and Percent of HIV Tests[1] by Race/Ethnicity and Year of Test MA, 1992-2000

Year of Test	Total Tests	Haitian % of Total Tests	Cape Verdean % of Total Tests	Brazilian % of Total Tests	Native American % of Total Tests	Unknown % of Total Tests
1992	33,055	1%	1%	1%	0%	3%
1993	35,544	1%	1%	1%	0%	3%
1994	41,390	1%	1%	1%	0%	4%
1995	46,861	1%	1%	1%	0%	4%
1996	50,356	1%	1%	1%	0%	4%
1997	45,982	1%	1%	1%	0%	3%
1998	45,170	1%	1%	1%	0%	4%
1999	44,634	1%	1%	1%	0%	4%
2000	46,317	1%	1%	2%	0%	3%

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table). Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program (percentages may not add up to 100% due to rounding).

- Asian/Pacific Islanders, Portuguese, Haitians, Cape Verdeans, Brazilians, and Native Americans comprised about 7% of all people tested for HIV each year at publicly funded HIV C&T sites from 1992 through 2000.

Table 3.53 Number and Percent of HIV Tests[1] by Mode of Exposure[2] and Year of Test MA, 1992-2000

		MSM	MSM/IDU	IDU	HTSX	Other/ NIR
Year of Test	Total Tests	% of Total Tests	% of Total Tests	% of Total Tests	% of Total Tests	% of Total Tests
1992	33,055	13%	1%	11%	69%	6%
1993	35,544	12%	1%	12%	85%	3%
1994	41,390	11%	1%	13%	72%	3%
1995	46,861	10%	1%	13%	87%	3%
1996	50,356	8%	1%	14%	74%	3%
1997	45,982	8%	1%	16%	88%	3%
1998	45,170	8%	1%	17%	72%	2%
1999	44,634	8%	1%	13%	86%	5%
2000	46,317	8%	0%	13%	73%	6%

1 Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table).; 2 Data collected on possible exposure on the C&T Report Form were aggregated using the CDC risk hierarchy in order to make these data more comparable to the HIV/AIDS case data. Refer to the Glossary for an explanation of Risk categories. MSM=male to male sex; MSM/IDU=male to male sex and injection drug use; IDU=injection drug use; HTSX=heterosexual sex. Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program (percentages may not add up to 100% due to rounding).

- From 1992 to 2000, heterosexual sex is the reported risk among the vast majority of people testing for HIV at publicly funded HIV C&T sites.
- From 1992 to 2000, the percent of people who report male to male sex as a risk when testing for HIV at publicly funded HIV C&T sites has declined from 13% to 8%.